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THE

MUSICAL CYCLOPEDIA:

OR THE

PRINCIPLES OF MUSIC

CONSIDERED AS A SCIENCE AND AN ART;

EMBRACING A

COMPLETE MUSICAL DICTIONARY,

AND THE OUTLINES OF A

14

MUSICAL GRAMMAR,

AND OF THE

THEORY OF SOUNDS AND LAWS OF HARMONY;

WITH DIRECTIONS FOR

THE PRACTICE OF VOCAL AND INSTRUMENTAL MUSIC,

AND A

Description of Musical Instruments.

BY WILLIAM S. PORTER.

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RECOMMENDATIONS.

From Lowell Mason, Professor in the Boston Academy of Music, Organist of Bowdoin St. Church, Editor of the Choir, Handel and Haydn Collection of Church Music, and various other musical publications.

Having been requested by the publisher to prepare a Musical Dictionary, and my avocations not affording me sufficient opportunity for such an undertaking, I requested Mr. Porter to engage in it, promising to render all the aid in my power. I have examined the work as it has advanced, and have occasionally made such alterations, and additions as have occurred to me. In the preparation of the work, which has cost him great labor and research, Mr. Porter has ever manifested correct science, taste and judgment. He has produced a book at once interesting and amusing, and at the same time instructive, and calculated to be useful. The articles relating to Church Music, I consider of great value; and hope they will be carefully examined by all those who are interested in this part of Public Worship. The book contains a mass of information, no where to be found in the same compass; and which could not otherwise be obtained but at great expense.

L. MASON.

From G. J. Webb, Professor in the Boston Academy of Music, and Organist of the Old South Church, Boston.

I have examined the sheets of the Cyclopedia as they have issued from the press, and fully concur in the above recommendation. Mr. Porter has executed his task with great care and accuracy; particularly, the scientific part, and the examples, which in works of this kind are apt to be incorrect.

The articles relating to harmony are correct and valuable. Had the limits of the work allowed, it were desirable that the illustrating examples be more extended, in order to gain a full idea of the subject. But in a work of this kind, extended examples cannot be expected. As a whole, however, I regard the book as a highly useful one, and containing a much larger mass of information on the subject of music, than any book of the same compass in the English language.

G. J. WEBB.

PREFACE.

THE following work was undertaken by the author at the request of Lowell Mason; who offered the free use of his very extensive musical library, and promised all the aid his other avocations allowed. The sheets have undergone his constant supervision; and he has made such alterations, additions, and suggestions, as have added essential value to the work. The original design was to compile simply a Musical Dictionary. But before the work went to the press, the materials accumulated to such an extent, that it was thought advisable to enlarge the plan, so as to embrace all that knowledge of the subject of music, which the taste and spirit of the times appear to demand. To render it still more useful, it is illustrated with numerous practical examples: for the correctness of which, great pains have been taken. The book embraces

I. A COMPLETE MUSICAL DICTIONARY, which occupies about one third of the work: in which is contained every term used in modern English Musical Dictionaries; with the addition of many others which belong to the history and curiosities of music. The price of such English Dictionaries is much more than the whole expense of this work.

II. A MUSICAL GRAMMAR, which occupies about 50

pages. A good general knowledge of this subject may be obtained by reading the following articles in their order: at the same time attending to the definitions of the terms as they occur: viz. *Characters*, *Intervals*, *Clefs*, *Measures*, *Accent*, *Scale*, *Key*, *Mode*, *Accidental notes*, *Ornaments*, *Abbreviations*, &c.

III. HARMONY, occupying about 80 pages. The articles may be studied in the following order, after becoming familiar with the Grammar: viz. *Chords*, *Discords*, *Harmony*, *Cadence*, *Motion*, *Modulation*, *Base*, *Consecutive*, *Fugue*, *Counterpoint*, &c.

IV. THE PRACTICE OF MUSIC, including various articles on MUSICAL TASTE, in all about 50 pages; under such heads as, *Dynamics*, *Melody*, *Beating time*, *Solmization*, *Breath*, *Choir*, *Chorister*, *Psalmody*, *Chant*, *Style*, *Expression*, *Accompanist*, *Organist*, *Voluntary*, *Orchestra*, *Design*, *Imitation*, *Composition*, &c.

V. The SCIENTIFIC PRINCIPLES of music; about 40 pages, besides the subjects appropriated to Harmony; including, *Sound*, *Pipe*, *String*, *Tuning*, *Temperament*, *Monochord*, *Percussion*, *Beats*, &c.

VI. HISTORIES OF MUSIC, under the heads of, *Music*, *Modes*, *Ballad*, *Song*, *Notation*, *Organ*, *Chant*, *Scale*, *Sacred Music*, &c.

VII. MUSICAL INSTRUMENTS, occupying upwards of 50 pages: in which are contained their origin, history, particular descriptions and scales of the more common, together with some general directions as to the manner of playing.

In addition to the above, the work contains many interesting miscellaneous articles, connected with the subject of music: such as the *Ear*, *Voice and Human Cries*, *Cries of Animals*, *Noises of Insects*, *Songs of Birds*, &c. and the use musical geniuses have made of such sounds.

The works which have been consulted in the compilation are too numerous to particularize. It is sufficient to say, they have been such as the professors in the Boston Academy of Music, consider the best authorities. The author, however, would acknowledge his particular obligations to two recent English works, Gardiner's "Music of Nature," and La Trobe's "Music of the Church:" the most important parts of which, we hope will soon be published in this country.

The leading object of the work has been utility; particularly as it respects the elevation of music as a part of the service of the sanctuary, and the influence of the cultivation of vocal music in the formation of the character of the young. The errors both in theory and practice, which now extensively prevail, have been exposed, and the proper remedies suggested.

With a sincere desire and prayer that the work may prove a blessing to the cause of sacred music; that it may be the means of leading the churches to regard singing, as it really is, a part of the public worship of the Supreme Being; and that it may have its legitimate influence, in the education of the feelings of the rising generation; the work is submitted to the patronage of the public by

THE AUTHOR.

The *following* ABBREVIATIONS are used, which require explanation.

abbrev. abbreviation.	*Gr.* Greek.
dimin. diminutive.*	*Ital.* Italian.
Fr. French.	*Lat.* Latin.
Ger. German.	*superl.* superlative.*

* For the manner of forming these, see p. 254, in the body of the work.

Standard Musical Works

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THE CHOIR; OR UNION COLLECTION OF CHURCH MUSIC. By L. Mason. This work is high recommended by the Handel and Haydn Society and by the Boston Academy of Music, and is undoubtedly one of the most valuable and interesting publications of sacred music extant.

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A TREATISE ON HARMONY, written and composed for the use of the Pupils at the Royal Conservatoire of Music in Paris; by Catel, Professor of Harmony in that Establishment. From the English Copy, with Additional Notes and Explanations. By L. Mason. 156 pp. 12mo.

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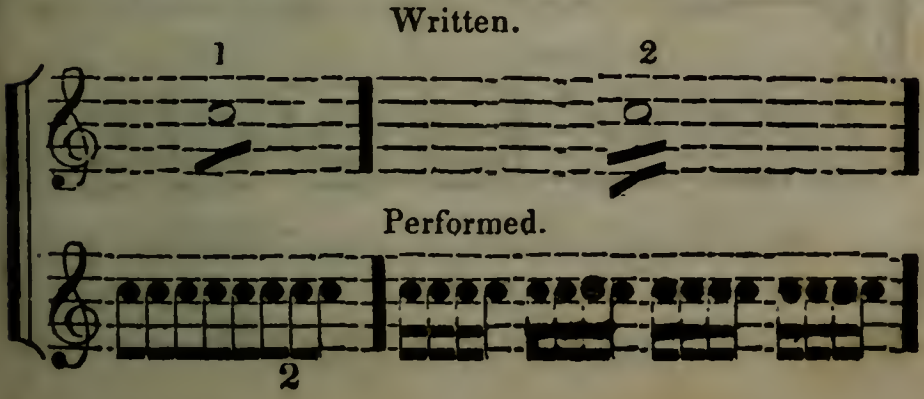
MUSICAL CYCLOPEDIA.

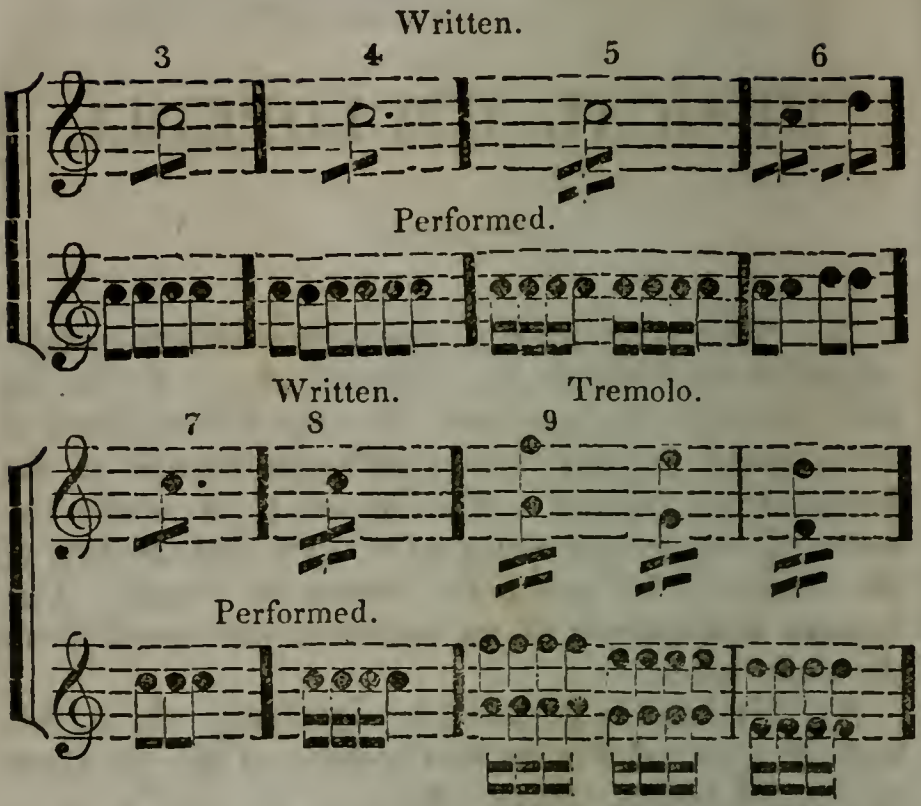
A. The sixth note of the natural diatonic scale, called by the Italians, *la.* (See STAFF.) A, on the first space of the base staff, was the lowest sound of the ancient Greeks, the *proslambanomenos* of the lowest Greek Modes. (See MODES.) A is also the name of the second string of a violin and the first of the violincello by which the others are tuned. The various instruments of an orchestra are tuned from the same letter.

A. (Italian) a preposition signifying, at, in, for, with, &c. as, *A due* for two voices; *A tre,* for three voices; *A tempo,* in time, &c.

ABACUS, an instrument for dividing the intervals of the octave.

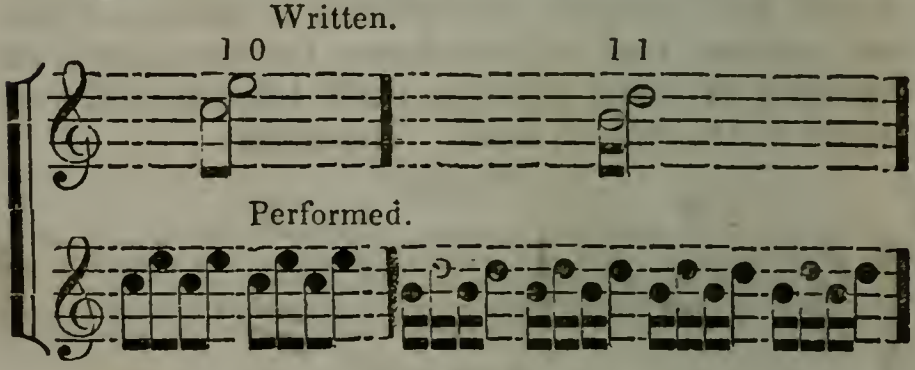
ABBREVIATION, shortening. A species of musical short hand writing, in which single notes are written with strokes. The strokes are taken for ties, and indicate that in performance the notes are to be repeated as many times as such tied notes are contained in the written notes. Examples:





A double chord abbreviated or marked *Tremolo*, denotes a rapid reiteration of the two notes. Ex. 9.

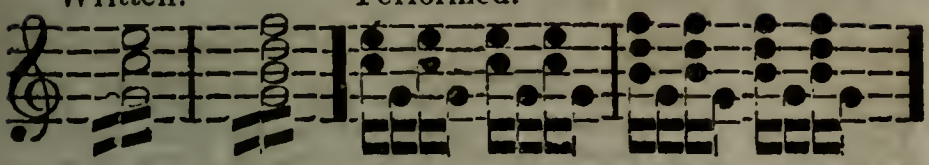
When two minims are tied, the two notes are to be struck alternately. Ex. 10 and 11.



A chord abbreviated and marked *Tremando*, means that the notes must be divided into two parts, and played with the rapidity of a shake. Ex. 12.

12 Tremando.

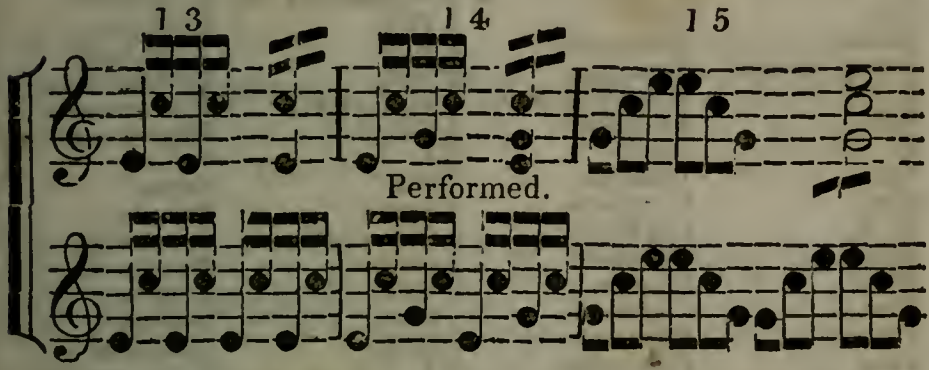
Written. Performed.



Arpeggios are abbreviated in the same manner. Ex. 13 to 15. (See ARPEGGIO.)

Written.

13 14 15

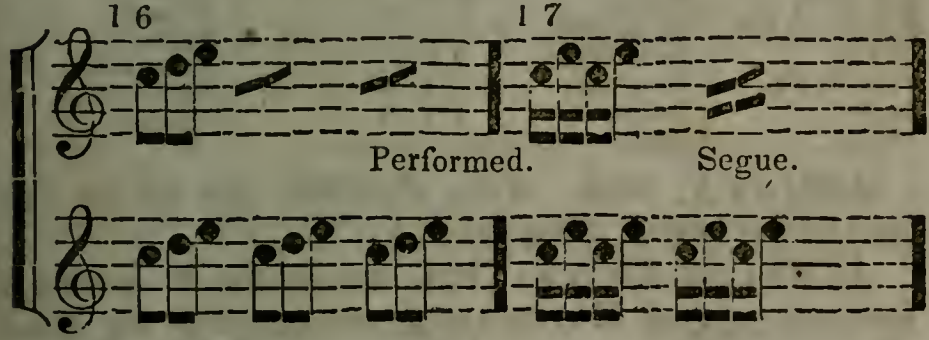


Performed.

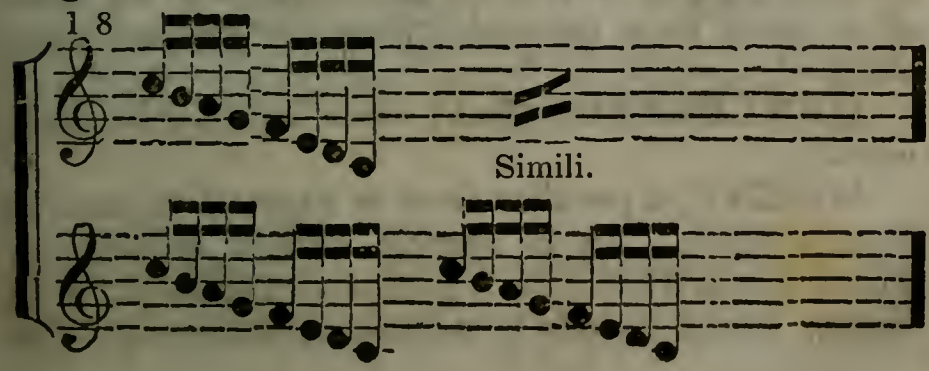
Strokes used without the notes, indicate that the previous notes are to be repeated. Ex. 16 to 18.

Written.

16 17



Performed. Segue.

18

Simili.

ABBREVIATIONS. The more common abbreviations in music are,

A.	Alto.	Len.	Lentando.
A 2,	For two voices &c	Lib.	Libitum.
A tem.	A tempo.	M. or Mez.	Mezzo.
Accel.	Accelerando.	M. F. or Mez. for.	Mezzo forte.
Accomp.	Accompaniment.	M. P. or Mez. pia.	Mezzo piano.
Ad lib.	Ad libitum.	8 va.	Ottava.
Adag. or Ado.	Adagio.	Ped.	Pedal.
Affet.	Affetuoso.	Perd.	Perdendosi.
Al seg.	Al segno.	Pia. or P.	Piano.
All.	Allegro.	Pianiss. or P. P.	Pianissimo.
Alt.	Alto.	Pizz.	Pizzicato.
Altiss.	Altissimo.	R. H.	Right hand.
Arpeg. or Arp.	Arpeggio.	Rall.	Rallentando.
B. C.	Basso Continuo.	Rinf. or Rf.	Rinforzando.
Bril.	Brillante.	Ritard.	Ritardando.
C.	Canto.	S.	Solo.
Cal.	Calando.	Seg.	Segue.
Cant.	Cantabile.	Semp.	Sempre.
C. B.	Col basso.	Sfor. or Sf.	Sforzando.
Cemb.	Cembalo.	Smorz.	Smorzando.
Cho.	Chorus.	Sost.	Sostenuto.
Clar.	Clarinet.	Stac.	Staccato.
Col ar.	Col arco.	Sym.	Symphony.
Cres.	Crescendo.	T.	Tenor and Tutti.
Con esp.	Con espressione.	T. S.	Tasto Solo.
D. C.	Da Capo.	Temp.	Tempo.
Dim.	Diminuendo.	Ten.	Tenuto.
Dol.	Dolce.	Tr. or T.	Trillo.
For. or F.	Forte.	Unis.	Unison.
Fortiss. or FF.	Fortissimo.	V.	Violin.
F. P.	Forte Piano.	Var.	Variation.
Forz. or Fz.	Forzando.	V. S.	Volti Subito.
L. H.	Left hand.	V. V.	Violins.
Leg.	Legato.		

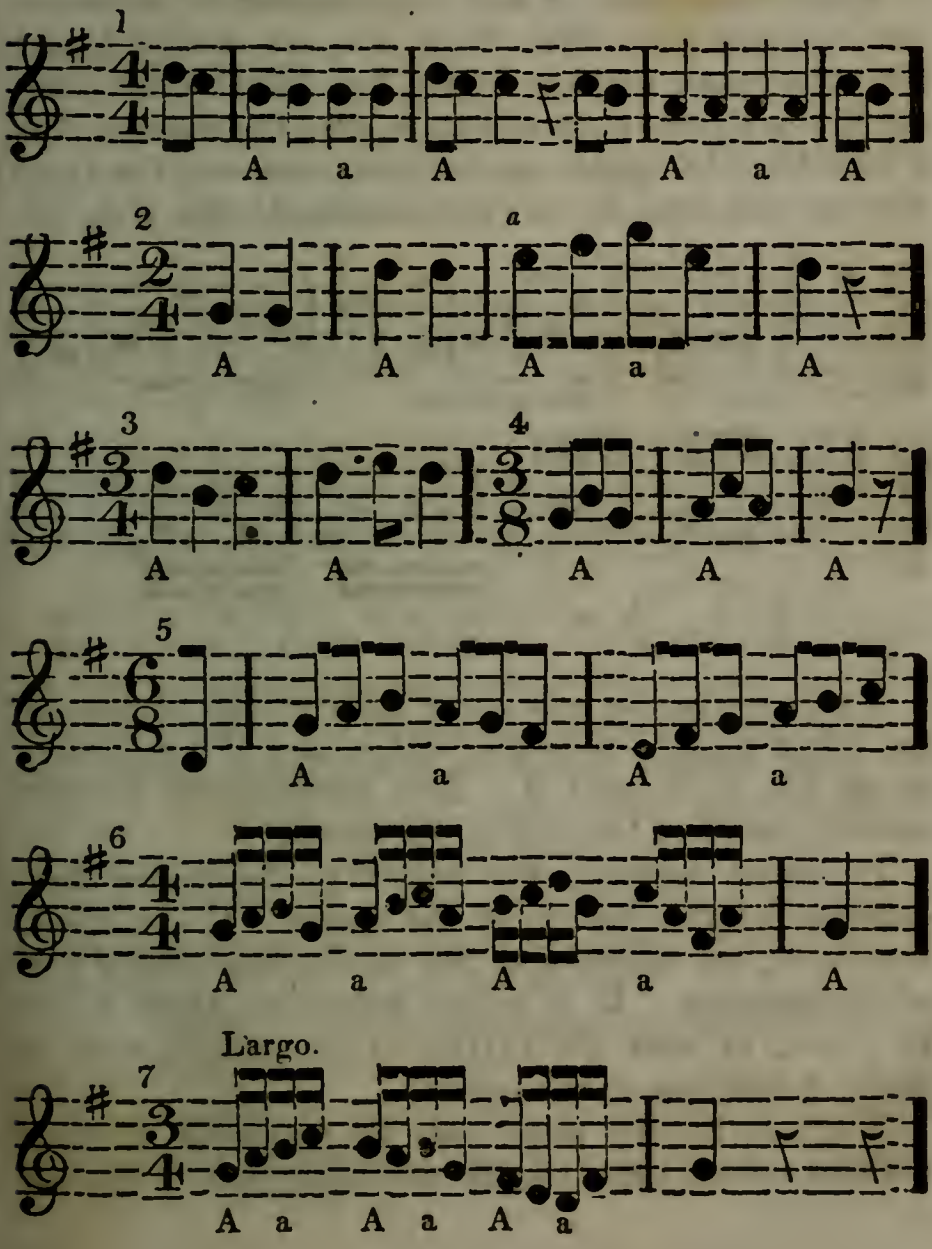
ABILITA, skill. *Aria d'abilita*, an air for the trial of the skill. (See ARIA.)

ACCELERANDO, (Ital. *accelerare* to hasten,) hastening; (see MOVEMENT,) accelerating the time of a piece at a particular place to produce some effect.

ACCELERATO, (Ital.) with increased quickness.

ACCENT, a peculiar force or expression given to certain notes. As in speech, certain syllables or words are marked with a particular emphasis; so in music, should melody be accurately accented. The

recurrence of the accent depends on the species of time, and the number of notes in a measure. In the simple measures, viz: double and triple, the accent falls on the first part of the measure. In the compound measures, the accent falls on the parts corresponding to the accented parts of simple measures of which they are composed, (see MEASURES,) but on the first part the accent is the fullest. Ex:

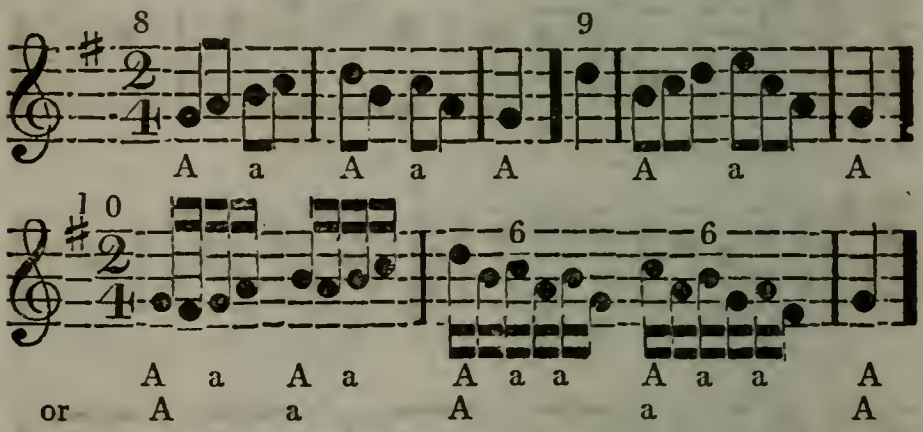


Those notes on which the accent falls are called *accented* notes, and the others *unaccented.*

When several notes occur to one beat, the accent falls on the first. Ex. 2 *a* and 6.

When two notes are tied, the first is accented and the second unaccented. Ex 8.

In triplets, the first note is accented and the second and third unaccented. Ex. 9.

When four, six, or any even number of notes are tied, the odd notes, first, third, &c. are accented, and the even notes, second, fourth, &c. unaccented ; but the first is always accented more than the others. Ex. 7 and 10. In quick movements however, the third &c. are but little or not at all accented. Ex. 6 & 10.

To preserve the accents in their proper places, we are often obliged to begin with a part of a measure ; as in Ex. 1, 5, and 9. The complement is then usually found at the end of the strain.

In psalm singing, the accent of the music must conform to the accent of the words. If the words require it, the accent may fall on the unaccented part of the measure. It is better, however, where it can be done, to alter the rhythm of the music, so as to make it conform to the words.

Without accent there can be no music, because without accent there can be no expression. The ear

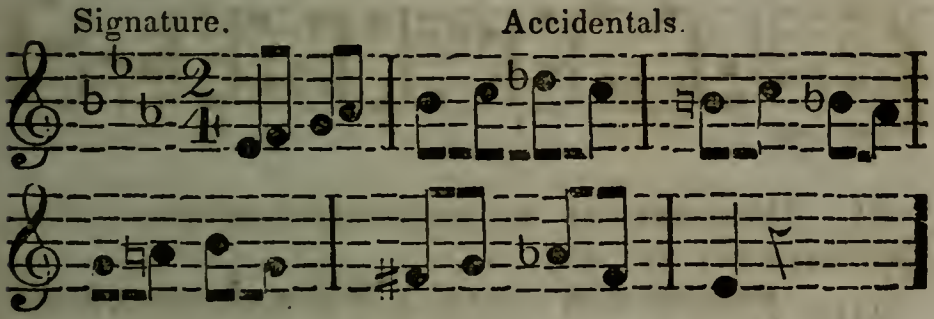
takes no pleasure in listening to a succession of monotonous sounds, but grows weary with the uniformity. The different degrees of loud and soft constitute one of its greatest pleasures.

ACCENTOR, the leading performer. (*not used.*)

ACCENTUATION, the application of the accent. In vocal music, the accent of the music must conform to the accent of the words.

ACCIACATURA, (Ital.) (See ORNAMENTAL NOTES.)

ACCIDENTALS, are the signs, flat, sharp, and natural, occurring in the course of a piece of music, and not belonging to the key, in distinction from the *essential* signs of the signature. Ex.



ACCIDENTAL CHORDS. (See CHORDS.)

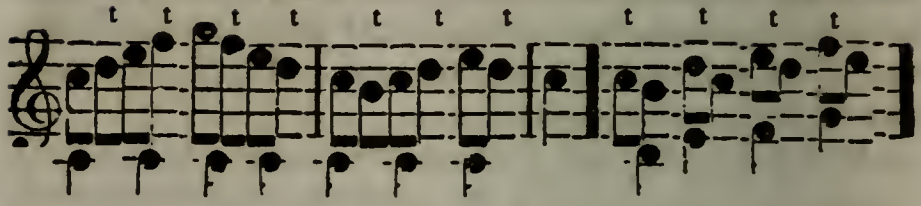
ACCIDENTAL NOTES, are those notes which do not belong to the harmony; the latter are called *essential* notes. Accidental notes are appropriated to ornamented or figurative music, to give grace and ease. In plain choral music they have no place. They are divided into six classes.

I. TRANSIENT NOTES, OR PASSING NOTES, are inserted between the essential notes of a chord or harmonic figure. They are called,

1. *Regular*, when they occur on the unaccented parts of the measure. Ex. 1.

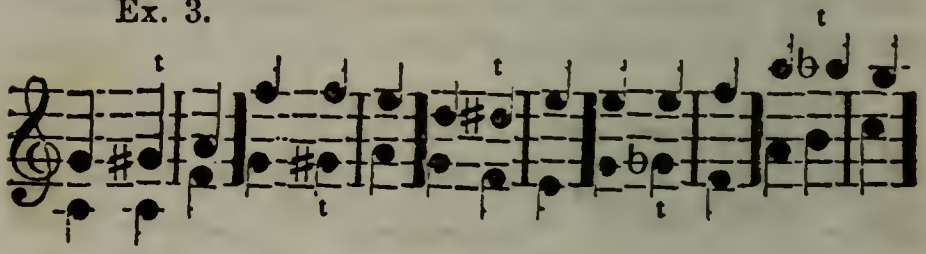
2. *Irregular*, when they occur on the accented parts of the measure. Ex. 2.

Ex 1. Regular. Ex. 2. Irregular.

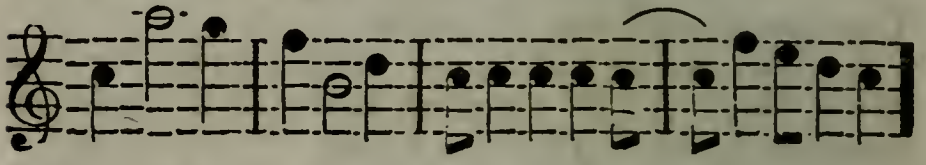


The regular and irregular transitions are often intermixed.

3. *Chromatic*, when they are formed by accidental sharps, and flats. The sharped or flatted notes in all diminished and superfluous intervals are transient. Ex. 3.

Ex. 3.

II. Ornamental or diminutive notes. (See Ornamental notes.)

III. Syncopated notes, Syncopations. } When an unaccented note is connected with the accented note which follows, so as to form one continued sound, it is called a *syncopated* note. It either occurs between two short notes, or the last note of a measure is connected with the first of the following. Ex. 4.



IV. Pedal or holding notes. (See Pedal notes.)

V. Suspension, VI. Anticipation. } (See *Figurative* Harmony.)

ACCOMPANIMENT, an instrumental part added to the principal, to fill out the harmony, and enrich the effect. The simple harmony is played, without any attempt at display, which will draw the attention from the melody and thus destroy the effect. When the instrumental harmony is not written, the accompanist is directed by a single part, usually the base. That base is to be touched by the left hand, and by the right the harmony indicated by that base note; (see RULE OF THE OCTAVE, and HARMONY,) by the melody of the other parts which are playing at the same time; by the score which may be placed before his eyes, or by the figures annexed to the base. (See *Figured* BASE.) The most important requisite in determining the harmony, is to know the fundamental note belonging to each chord, and what note in that chord the given base note may be; and also what notes are simply accidental or not belonging to the harmony. To know this requires a knowledge of the different chords and their regular progression in harmony. (See CHORDS and HARMONY.)

ACCOMPANIMENT AD LIBITUM, implies that the piece may be performed with or without the accompaniment. It does not however follow that the performance will be as perfect without as with the accompaniment, but that it may be omitted without any material detriment to the intended effect.

ACCOMPANIMENT OBLIGATO, signifies that the accompaniment is indispensable to the just performance of the piece.

ACCOMPANIST, the performer who plays the accompanying part. It is absolutely necessary that an accompanist be a skilful musician, acquainted with the science of harmony; he must perfectly understand the nature of accompaniment, and must have a sensible ear, and well founded taste. It is his

business to fix the key and sustain the pitch for the voices. This requires him to have under his finger the required note, and re-strike it if the voice falters; or if the voice varies from the pitch, to anticipate it and set it right. The melody and execution should be left to the principals. Where the effect depends on the melody of the principal part, the accompanying harmony should be thin and soft; but when there is little melody, the harmony may be full and sustained. When there is difficulty in preserving the time, the accompanist should strike the several parts of the measure firmly and distinctly.

It is to be regretted that so few instrumental performers understand the nature and design of accompaniment in church music; that it is not for display, but to sustain and harmonize the voices. The prevalence of a frivolous taste is the more to be regretted, from the influence possessed over the feelings by the mere powers of the instruments particularly the organ. Ecclesiastical music is of a perfectly distinct character from theatrical. The preservation of this distinction depends mainly on the organist, or other instrumental performer. It is his duty to mark it by broad and intelligible lines, so that the instrument may speak a language comprehended by the devout, however dark and uninteresting to the profane. Yet it not unfrequently happens, that this distinction is confounded by the very individual whose duty it is to observe it; but who, from the want of a devotional spirit, burdens a sacred composition with secular ornaments. Place before him a tune of genuine church character, rich and full in harmonious chords, and instead of retaining its majestic simplicity, he treats it as a mere ground for his variations. He has no idea of confining his talents to the province assigned him, as a channel for communicating the mind of

the composer to the mind of the hearer; but proceeds to crowd a choral, the design of which is best understood by the absence of every kind of decoration, with such a multitude of turns, flourishes, interludes, shakes, trills, appogiatures, and other expletive notes, that the unfortunate tune is totally overwhelmed under a mass of ill judged musical commentary. This mode of clothing a simple and sublime composition, instead of adding to its beauty, and exciting additional devotion in the hearts of the people, is but,

> The ivy which has hid its princely trunk,
> And sucked the verdure out on't.

In our country churches too, where organs are not used, the instruments often play the air in octaves, or play the alto or tenor above the treble, in addition to the above misplaced ornaments. The design of the psalmody is thus frustrated. The congregation are unable to understand and cease to accompany it. The imagination may indeed be amused, but the heart remains uninterested, while the attention is distracted and overwhelmed. Such an attempt at display exhibits not only want of taste and judgment, but also want of science. The fact is, that music resembles every other art; the farther a person advances in the study of it, the more does he delight in simplicity of manner, the less is he attracted by superficial ornament, and the more fastidious does he become of coxcombry and conceit.

ACCORD. (See CHORD.)

To ACCORD, to agree in pitch and tone.

ACCORDARE, (Ital.) to tune.

ACCORDATURA, (Ital.) agreement in tune. The scale or tuning of the open strings of any instrument. The sounds G, D, A, and E, form the accordatura of the violin.

ACOUSTICS, (Gr. *akouo*, to hear,) the theory of

sounds, the theoretical part of music; a science which has for its object, to determine the relations of sounds, and to fix the ratios of harmonic intervals, according to the vibrations of a sonorous body. (See SOUND, VIBRATIONS, &c.) It explains the reason of our receiving pleasure from harmony and melody. (An excellent treatise on this subject is found in the "Encyclopedia Metropolitana," Art. "Sound.")

ACUTE, high, opposed to grave. Acute sounds are the most thrilling, and are produced by the most frequent vibrations of the sounding body. (See SOUNDS.)

AD, (Ital.) a preposition meaning at, to, &c. as, *Ad Libitum*, at pleasure.

ADAGIO. (Ital. leisurely,) very slow; the second from slow to quick of the five principal degrees of movement. (See MOVEMENT.) It is suited to calm and plaintive expression, and designed to affect the heart rather than to please the ear. In the adagio, the notes should be well sustained, and the ornaments smooth and flowing. *Adagio* is likewise used as a substantive, and signifies a slow movement; as, an "Adagio by Haydn."

ADAGISSIMO, (Ital. superlative,) the slowest time. (*little used.*)

ADDED LINES. (See LEGER LINES.)

ADDED SIXTH, a six added to a fundamental chord in the system of Rameau.

ADDITION. (See POINT.)

ADJUNCT NOTES, are those which do not form an essential part of the harmony.

ÆOLIAN, &c. (See EOLIAN, &c.)

CON AFFETTO, (Ital. *affetto*, love, affection.) &

AFFETUOSO, (Ital. affectionate,) a movement moderately slow and soft, and expressing tenderness and feeling.

AFFINITY, (See *Relative* KEYS and CHORDS.)

AGILITA, skill, activity. (See ARIA D'AGILITA.)

AGITATO, (Ital.) interrupted, agitated by high wrought feeling and passion, designed to surprise and astonish the hearer.

AIR, (Ital. *aria*,) melody, opposed to recitative. Airs are named from the different style of composition, or the different uses to which they are applied; as, Minuet, March, &c. (See ARIA and MELODY.) But the word is properly applied to vocal music, and signifies a composition for a single voice, and adapted to words, with a regular beginning and ending on the same key, and regular divisions of time. Air also sometimes denotes the principal melody in church music.

AL, ALLO, ALLA, (Ital. to the,) a preposition signifying to, in, &c.; as, *Al segno*, at or to the sign. (See SEGNO.)

ALLA, (Ital.) according to, in the style of; an Italian prefix.

ALLA BREVE, a movement rather quick, having four minims in a measure.

ALLEGRAMENTE, (Ital.) gaily, joyfully.

ALLEGRETTO, (Ital. dimin.) somewhat quick. (See MOVEMENT.)

ALLEGRISSIMO, (Ital. superl.) very quick. (*little used.*)

ALLEGRO, (Ital.) joyful, quick; the fourth from slow to quick of the five principal degrees of movement. (See MOVEMENT.) The features of allegro are lightness, fire and vivacity. The most flowing passages should be marked with point and animation. Allegro is also used as a substantive. (See ADAGIO.)

ALLEGRO DI MOLTO, (Ital.) very quick.

ALLEGRO NON MOLTO, (Ital.) not very quick.

ALLEGRO MA NON PRESTO, (Ital.) quick, but not in the extreme.

ALLELUJAH. (See HALLELUJAH.)

ALLEMANDE, (Fr.) a slow air in 4 : 4 time. (*little used.*)

ALT, (abbreviation of *alto;* Latin *altus,*) high; denoting the notes of the octave above upper F in the treble staff.

ALT FLUTE, a tenor flute.

ALTA, high, above; as, *alta ottava,* an octave above.

ALTERED NOTES, } are those notes which re-
ALTERATIONS, } ceive any alteration, either by raising or lowering, by a sharp, flat, or natural, not belonging to the key.

ALTISSIMO, (Ital. superl. of *Alto,*) the highest; denoting the octave above alt, the highest octave.

ALTIST, or ALTISTA, an alto singer.

ALTO, } (Ital.) the counter tenor,
ALTO TENORE, } embracing the highest male and lowest female voice. (See VOICE.)

ALTO PRIMO, the first or upper alto.

ALTO SECONDO, the second or lower alto; in distinction from the upper alto.

ALTO VIOLA, (See TENOR VIOL.)

ALTUS, (Lat.) (See ALTO.)

AMABILE, (Ital. affectionate,) a movement somewhat slow, in which the notes are struck in a soft and gentle manner and sustained.

AMATEUR, a lover and practitioner of music, but not a professed musician.

AMATI, the name of a family of celebrated violin makers, natives of Cremona in Italy, who flourished about 1650. From the excellence of the instruments, they have obtained the name of the makers; as an "amati," for a violin made by them.

AMBITUS, the compass of a mode; the distance between its highest and its lowest note. (*ancient.*)

AMBROSIAN CHANT. (See CHANT.)

AMEN, (Hebrew,) so be it, truly, verily. The word amen usually forms the conclusion of anthems and other sacred compositions. It has so long been one of the principal themes of full harmony, as to have given a distinct appellation for music adapted to its expression; as when we say, such an anthem concludes with an Amen Chorus.

AMOROSO, (Ital. *amore*, love,) in a soft, delicate, and affectionate style; same as *amabile.*

ANALYZE, to decompose; to take to pieces. To understand the structure of a piece of music, it is necessary to analyze it, in which we have three distinct operations.

1. To separate through the piece, all the accidental from the essential notes.

2. To find and place by themselves all the fundamental notes of the different chords.

3. To compare the composition with the progressive fundamental chords, in order to ascertain how the different chords are linked together. (See CHORDS, HARMONY, &c.)

ANCHE, (Fr.) a reed. *A anche* denotes instruments with reeds, as the clarinet and trumpet, and hautboy pipes of an organ.

ANCIENT MODES. (See MODES.)

ANCIENT MUSIC, music of Handel's time and previous. (See HISTORY OF MUSIC.)

ANDANTE, (Ital. *andare*, to go, to step,) the third of the five principal degrees of movement. (See MOVEMENT.) In a distinct and exact manner like the steps in walking.

ANDANTE LARGO, slow and distinct.

ANDANTINO, (Ital. dimin.) (See MOVEMENT.)

CON ANIMA, (Ital. *anima*, soul,) with feeling.

ANIMATO, } (Ital.) with animation, boldness,
ANIMOSO, } and full accent.

ANOMALOUS CHORDS. (See CHORDS.)

ANTHEM, church music adapted to passages taken from the psalms and other parts of scripture, in which may be introduced, choruses, semichoruses, trios, duets, solos, recitatives, &c. Anthems are named from their peculiar characteristics.

1. AMEN ANTHEM. (See AMEN.)

2. FULL ANTHEM, an anthem consisting only of chorus.

3. INSTRUMENTAL ANTHEM, furnished with accompaniments for various instruments.

4. SOLO ANTHEM, consisting of solo and chorus.

5. VERSE AND CHORUS ANTHEM, containing verse and chorus, but beginning with chorus.

6. VERSE ANTHEM, same as 5 only beginning with verse.

ALL'ANTICA, (Ital.) in the ancient style. (See ANCIENT MUSIC.)

ANTICIPATION, taking beforehand. (See ACCIDENTAL NOTES, VI.)

APOLLO, the god of music.

APOTOME. (See INTERVAL.)

APPOGIATURA, (Ital. *appogiare* to lean upon.) (See ORNAMENTAL NOTES.)

ARCATO, (Ital.) bowed. (See *Col* ARCO.)

ARCHET, (Fr. a bow.) *A archet* denotes instruments played with a bow, as the violin, violincello, &c.

ARCO, (Ital.) a bow, by which the tone is drawn from the strings of a violin, &c.

COL ARCO, played with the bow; used after a *pizzicato*, to denote that the bow is again to be used. (See PIZZICATO.)

ARDITO, (Ital. *courageous*,) in a bold and energetic manner.

ARETINIAN SYLLABLES. (See HISTORY OF MUSIC, and GUIDO ARETINUS.)

ARIA, (Ital.) air. (See AIR and MELODY.)

ARIA D'ABILITA, (Ital.) an air for the trial of skill; a melody of difficult execution, and the just performance of which calls forth all the powers of the singer.

ARIA DI BRAVURA, } an air in which the
ARIA D'AGILITA, } melody is rapid, florid, and energetic. A flexible voice with great compass is the principal requisite to excel in this style.

ARIA BUFFA, a humorous or comic air.

ARIA DI CANTABILE, an air which must be flowing and melodious, and the performance smooth and replete with feeling. To excel in this, in addidition to a good voice, the singer must feel and express the sentiments intended by the composer.

ARIA CONCERTATA, (Ital.) a grand species of vocal composition for a single voice, the accompaniments of which are constructed in the concert style, enriched and embellished with solo passages for the various instruments concerned.

ARIA FUGATA, (Ital. fugued air,) an elaborate species of melody much used by Handel and his contemporaries, in which the accompanying parts were written in fugue.

A MEZZA ARIA, (Ital.) an expression applied to the compass of an air, the notes of which have no great extension, and lie in the middle of the compass of that species of voice for which it is composed.

ARIA PARLANTE, an air in a style between air and measured recitative. "Comfort ye my people," by Handel, is a fine specimen of this style.

ARIETTA, (Ital. dimin. of *aria*,) a short air in a familiar style.

ARIOSO, (Ital. *aria*, an air,) like an air, melodious and graceful, admitting ornament.

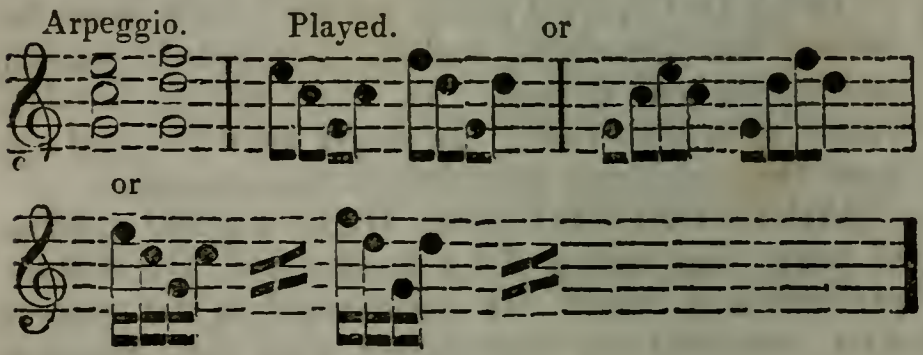
ARMONIA, ARPA, &c. (Ital.) (See HARMONY, HARP, &c.)

ARPEGGIANDO, (Ital. *arpeggiare*, to play the harp,) performing in arpeggio.

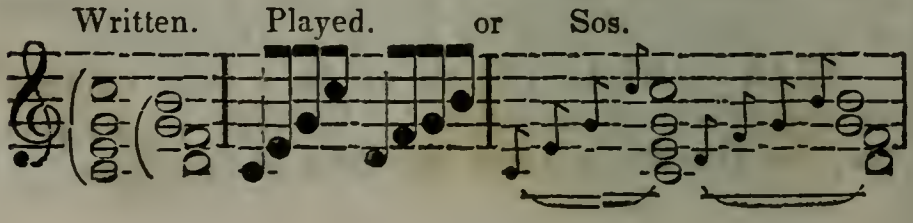
ARPEGGIATO, a broken harmony.

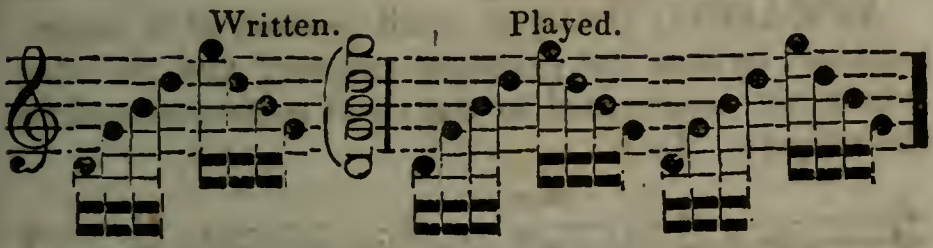
ARPEGGIATURA, a succession of broken chords.

ARPEGGIO, (Ital. *arpa*, a harp,) signifies that the notes of a chord must be successively played, one after another in the harp style, which may be done in various ways. Ex. 1.



The arpeggio is used by such instruments as are unable to strike more than one note at a time, as the violin; but more particularly by such as do not sustain the sound, as the piano forte. When a waving line is placed before the chords, they are to be struck successively, generally from the lowest to the highest, and then, if marked *sostenuto*, sustained. Ex. 2.



The waving line is also used as an abbreviation. Ex. 3.

ARPEGGIO ACCOMPANIMENT, an accompaniment consisting chiefly of the notes of the several chords taken in succession.

ARRANGEMENT, the disposal of the parts of a composition to accommodate it to the powers of instruments or parts, for which it was not originally designed.

ARSIS, (Gr. *airo*, to raise,) the full part of the measure, which we indicate by the downward beat. (See Beating time.)

ARTICULATION, the distinct and rapid utterance of the consonants of a syllable. The sound should be prolonged entirely on the vowel, and the mouth kept open in one fixed position from the beginning to the end of the sound, and the consonants before and after the vowel forcibly and quickly yet distinctly uttered. Without this, little expression can be given to vocal music. To acquire a good articulation, each element of the language should be separately practised in such a manner as is pointed out in the "Manual of Instruction in the Elements of Vocal Music."

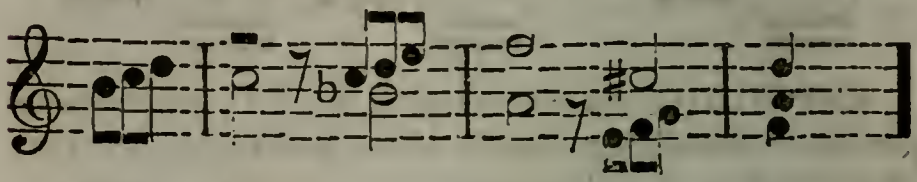
ARTIFICIAL, opposed to natural or fundamental. (See Harmony and Chords.)

ASSAI, (Ital. denoting comparison,) much, very; as, *allegro assai*, very lively or quicker than allegro; *largo assai*, very slow, or slower than largo.

ATTACCA, (Ital. *attaccare*, to join,) implies that

the following movement is to be immediately connected with the preceding.

ATTACCO, (Ital.) a small portion of a fugue, too short to form the principal subject; and for that reason not constrained to the strict rules observed in the subject. Ex:



ATTO, (Ital.) act.

ATTO DI CADENZA, (Ital.) that disposition of the parts which indicates a cadence. (See CADENCE.)

AUGMENTATION, in a fugue or canon, is doubling the value of the notes of the subject, when the answer is given.

AUGMENTED INTERVAL. (See INTERVAL.)

AUTHENTIC, chosen, approved.

AUTHENTIC CADENCE, a perfect cadence.

AUTHENTIC MODES. (See MODES.)

AVE MARIA, (Lat. hail Mary,) a title given to pieces of music in the Roman Catholic church service, taken from the first words of the salutation addressed by the angel Gabriel to the Virgin Mary, when he brought the tidings of the incarnation.

AVOIDED CADENCE. (See *Interrupted* CADENCE.)

B.

B. The seventh note of the natural diatonic scale, called *si* by the French and Italians. The Germans give the name B to B flat, in distinction from B natural, which they call H. (See STAFF, and SOLMIZATION.)

B. An abbreviation of base.

BACHELOR OF MUSIC, a title of honor given at the universities of Europe to a musician, as his first degree in music. One qualification for this honor is to compose an exercise in six parts for voices and instruments.

BAGPIPE, a wind instrument of high antiquity among the northern nations of Europe, particularly Scotland. It consists of two principal parts; the first comprises the tight leathern bag which contains the wind blown into it by the mouth, through a small tube called the *port vent*, furnished with valve to prevent the wind from returning. The second part of the instrument consists of two pipes; the great pipe or drone, which gives one continued base note; and the small pipe, which is furnished with a reed and played like a flute or clarinet, by stopping and opening with the fingers its eight holes. The wind is forced into the pipes, by compressing under the arm the inflated bag.

BALLAD, a song; a brief simple tale conveyed in three or four verses and set to a short familiar melody. Originally it was a little history told in lyric verses, and sung to the harp or viol, by the

author, or the singer who attended him. (See BARD.) The ballad has less musical pretension than the air, and the words claim our attention quite as much as the tune. With ordinary listeners, this species of song is more generally felt and understood than any other. Songs have at all times afforded amusement and consolation to mankind. Every passion of the human breast has been vented in song. Before music is cultivated as an art, every country has its national songs, which enter largely into all their amusements, and are sung with feeling by exiles and wanderers from their native land: every profession and trade has its song; the shepherd, the reaper, the miller, the weaver, the smith, and the nurse and the lover. For simplicity and expression, perhaps there are no ballads more genuine than those of the Scotch.

BALLATA, (Ital. *ballare*, to dance,) in the style of a dance, an air suitable for dancing.

A BALLATA, in the style of a ballad. The term applies to a chorus that is repeated at the end of each verse of a song.

BALLET, (Fr.) a representation of some fable in dancing and music.

BALLO, (Ital.) a dance, a melody suitable for dancing.

BAND, a company of practical musicians performing in concert on their respective instruments.

BANDORE, an old stringed instrument of the lute kind.

BAR, (See CHARACTERS.)

BARBARISM, false harmony or modulation, insufferable to the ear.

BARCORELLES, simple popular melodies sung by the Venetian gondoliers. They are so graceful and pleasing that the musicians of Italy pride themselves on knowing and singing them. The gondo-

liers are bards who have the liberty of visiting all the theatres gratis, which gives them an opportunity of cultivating their ear and taste without expense.

BARDS, (Welch,) sacred poets and minstrels of antiquity, common among the Gauls and Celts. They were reverenced not only as poets and musicians, but as priests and prophets, and had great influence even with princes. By their songs in praise of military fame, they inspired heroes with almost supernatural courage. The last of this order in Ireland, was Carolan, who died in 1738. To him we are indebted for a great part of the Irish melodies.

BARITONE, } a voice between the base and
BARITONO, } tenor, extending from Bb to F. (See Voice.)

BARRED C. (See Measures.)

BAS, (Fr.) low, grave.

BASE, the foundation; the lowest part in music, called base because it is the foundation of harmony, the support of the whole superstructure of composition. It is the most important part in music; and it is a general maxim among musicians, that when the base is good the harmony is rarely bad. There are many different kinds of base, viz. Constrained base; Continued base; Figurative base; Figured base; Fundamental base; Ground base; and Thorough base: though some of these terms are different names for the same thing.

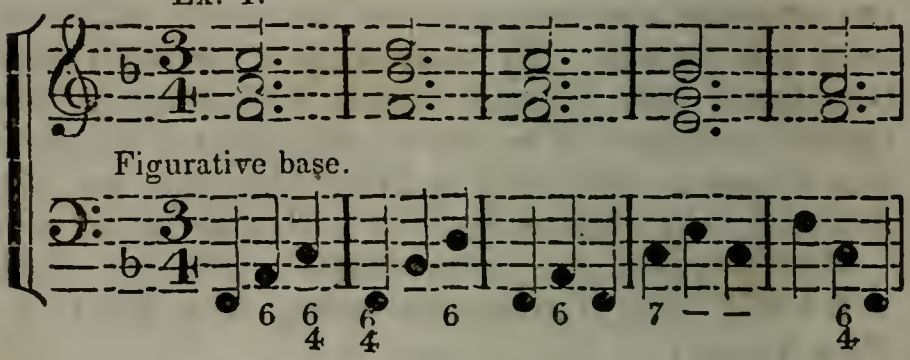
Constrained BASE, a base whose subject or theme consisting of a small number of measures, as two, four, or eight, is continually repeated, while the melody and harmony of the upper parts vary. This base was formerly much in fashion, but is now become obsolete.

Continued BASE. (See *Thorough* Base.)

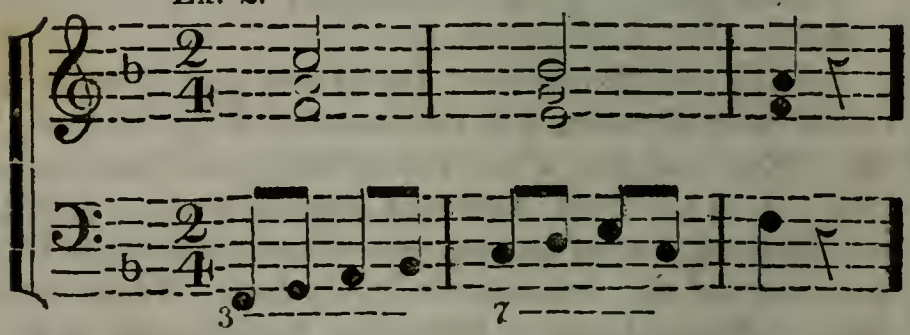
Figurative BASE, is one in which several base

notes are taken to one chord; the base notes must belong to the chord, Ex. 1; but the conjoint notes, between the several notes of the chord may be used as transient notes. Ex. 2. (See *Figurative* HARMONY.)

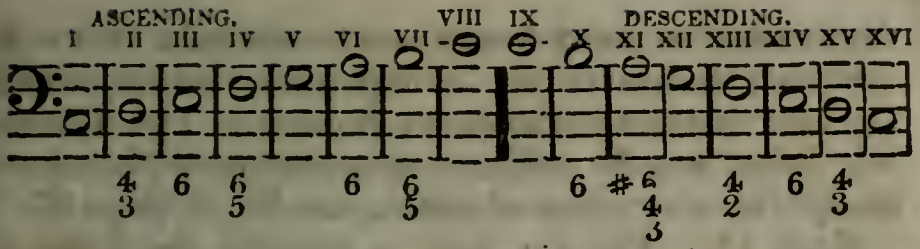
Ex. 1.



Ex. 2.

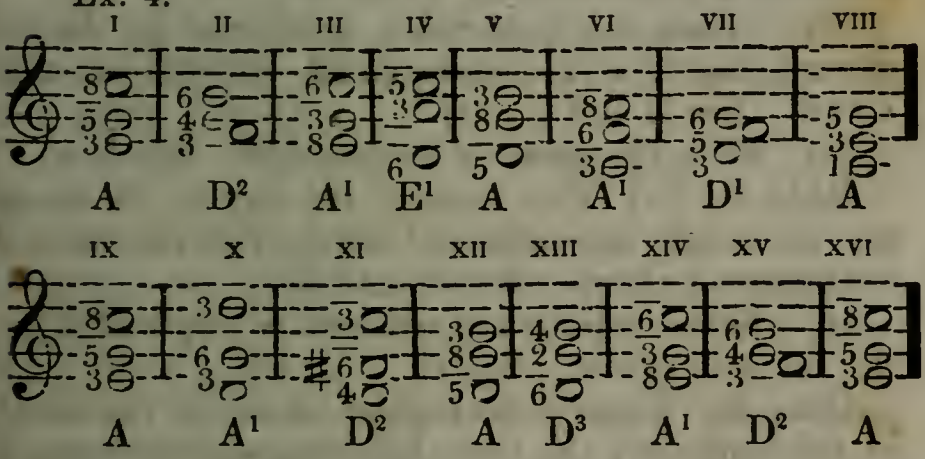


FIGURED BASE, embraces two distinct objects; first, to determine according to the laws of harmony, what chords are to be assigned to any given base; second, to assign those chords to that base. The former is the theoretical, and the latter the practical part of what is often termed *Thorough Base*.

I. TO DETERMINE THE HARMONY BELONGING TO A GIVEN BASE, the following formula called the *Rule of the Octave*, was invented about the year 1700, to denote the chords suitable for each degree of the scale, both for an ascending and descending base. Ex. 3.

The accompanying chords which are indicated by the figures, are written below. Ex. 4.

Remark. In writing out the chords, it is immaterial at what distance above the base, the several intervals are taken, (see *Position of* CHORDS,) or in what order, provided the right letters are used; thus, a fifth may be taken at the distance of a fifth, or an octave and a fifth that is a twelfth, or two octaves and a fifth, &c. In either case it is regarded simply as a fifth.

Ex. 4.



The letters underneath are applied to distinguish the different chords as they are classified under the article chords, (which see,) and also Ex. 7, page 40. The figures before the notes indicate the intervals above the base, and so in examples below. This is called the accompaniment of the octave, because the several notes of the octave are usually accompanied with these same chords. There are however in mo-

dern music so many exceptions to this rule, that it is rendered comparatively unimportant, except when the base moves by successive degrees. The following rules may be sufficient to guide us in plain harmony; for a synopsis of which, see Ex. 5, page 37.

Rule 1*. The key note or tonic of the base is accompanied,

(*a*) With the common chord. See A and B, Ex. 5: and Ex. 7, page 40.

(*b*) When three tonic notes occur in succession, the middle one is often accompanied with the second inversion of the common chord. See A^2 and B^2 Ex. 5 and 7.

Rule 2. (*a*) The second of the key or the supertonic, (see SCALE,) is usually accompanied with the second inversion of the dominant seventh, and followed by the tonic chord. See D^2.

(*b*) When the supertonic is followed by the dominant chord, it is accompanied with the common chord. See B and C: or,

(*c*) With the chord of the seventh. See E & F.

Rule 3. (*a*) The third of the key or the mediant is usually accompanied by the first inversion of the common chord. See A^1 and B^1.

(*b*) Sometimes, when softness is required it has the common chord. See B.

Rule 4. There is no regular chord for the fourth or subdominant; the three following are used nearly in an equal degree. (See CADENCE.)

(*a*) The common chord. See A and B.

(*b*) The first inversion of the common chord, usually followed by the dominant. See B^1 and C^1.

(*c*) The first inversion of the chord of the seventh, and followed by the dominant seventh. See E^1 and F^1.

(*d*) When it follows the dominant chord, it usual-

* N. B. These rules are intended only as an aid to learners who wish to play the harmony of plain church music.

ly is accompanied with the third inversion of the dominant seventh. See D^3.

Rule 5. The dominant is accompanied,

(*a*) With the common chord. See A : or,

(*b*) With the dominant seventh, followed by the tonic chord. See D.

(*c*) When two dominant base notes succeed each other near a cadence, the first has often the second inversion of the common chord. See A^2 and B^2. (See CADENCE.)

Rule 6. The sixth or submediant is accompanied,

(*a*) With the first inversion of the common chord. See A^1 and B^1.

(*b*) With the common chord, when it follows the dominant. See B and A. (See *False* CADENCE.)

(*c*) When followed by the dominant, it often becomes the second inversion of the dominant seventh of a new key, in which the dominant becomes the key note. See D^2.

Rule 7. The seventh or leading note is accompanied,

(*a*) With the first inversion of the dominant seventh, and followed by the tonic chord. See D^1.

(*b*) With the first inversion of the common dominant chord. See A^1.

Note. Each second chord in the above rules, belongs to the minor key.

In Old Hundred :* Rule 1*a* occurs at notes 1, 2, 8, 9, 10, 11, 15, 19, 24, 25, 26, and 32. Rule 2*b* occurs at note 29, followed by the tonic harmony which is very uncommon. Rule 3*a* occurs at notes 5, 21, and 30. Rule 4*a*, at notes 14, and 22. Rule 5*a*, at notes 3, 7, 12, 16, 18, 20, and 28 ; 5*b*, at notes 23, and 31. Rule 6*b*, at notes 4, 6, 13, and 17 ; and 6*c*, without the fourth, at note 27. Thus we see

* See Choir, page 69.

that the tonic and dominant chords occur more frequently than all the rest. These two chords give character to a piece of music. The last chord must regularly be the tonic chord, and the last but one the dominant or ruling chord, which together make a perfect cadence.

EX. 5. SYNOPSIS OF THE CHORDS FOR EVERY BASE NOTE OF THE SCALE.

Rule,	1*a*, 1*b*	2*a*, 2*b*, 2*c*	3*a*, 3*b*
Intervals.	8‡, 8‡ / 5‡, 6 / 3†, 4	8*, 8‡, 8* / 6†, 7† / 4‖, 5‡ 5‡ / 3†, 3†, 3‡	8*, 8‡ / 6‡, 5‡ / 3‡, 3†
Base.	Tonic.	Supertonic.	Mediant.
Figures,	6 4	4 3 7	6
Chord, Maj. Key,	A, A^2	D^2, B, E	A^1, B
Chord, Min. Key,	B, B^2	D^2, C, F	B^1, not used.

4*a*, 4*b*, 4*c*, 4*d*	5*a*, 5*b*, 5*c*	6*a*, 6*b*, 6*c*	7*a*, 7*b*
8‡, 8‖, 8* / 6†, 6†, 6‡ / 5‡, 5‖, 4† / 3†, 3‡, 3‡, 2‡	8‡, 8‖, 8‡ / 7† / 5‡, 5‡, 6 / 3†, 3†, 4	8*, 8‡, 8* / ♯6† / 6‡, 5‡, 4‖ / 3‡, 3†, 3†	6‡, 6‡ / 5†, / 3‡, 3‡
Subdominant.	Dominant.	Submediant.	Leading note.
6 6 4 / 5 2	7 6 / 4	6 ♯6 / 4 3	6 6 / 5
A, B^1, E^1, D^3	A, D, A^2	A^1, B, D^2	D^1, A^1
B, C^1, F^1, D^3	A, D, B^2	B^1, not used.	D^1, A^1

* Usually omitted.
† Must not be omitted, in harmony of more than two parts.
‡ May be omitted, or doubled, that is, its octave taken.
‖ May be omitted.
Notice that the figures of the rule, also point out the base note; thus, 1 stands for the key note, 2 for the second, &c.

REMARK. These chords may be written out, in all the common keys, on a card, and thus we can have before our eyes nearly all the different chords in use.

The following table gives the chords which usually succeed each one in Ex. 5. The first in each column is the given chord, and the others after *by*, those which usually follow.

Ex. 6. TABLE OF SUCCESSIVE CHORDS.

1*a* by 5, 4, 6, &c.	4*a* by 1, 5, 3, &c.	6*a* by 5, 1, 7*a*. &c.
1*b* " 1*a*.	4*b* " 5*b*, *c* or *a*.	6*b* " 3, 4, 1, 5, &c.
2*a* " 1*a* or 3*a*.	4*c* " 5*b*, or 2*c*.	6*c* " 5*a*.
2*b* " 5*b* or *a*.	4*d* " 3*a*.	7*a* " 1*a*.
2*c* " 5*b* or *a*.	5*a* " 1*a*, 6*b* &c.	7*b* " 1*a* &c.
3*a* " 5, 4, 2, &c.	5*b* " 1*a* or 6*b*.	(See Ex. 7, page 40)
3*b* " 6*c* or 5*a*.	5*c* " 5*a* or *b*.	

When different chords are given, the first in order has the preference.

When the same base note is repeated, it is better to vary the chords. Figurative harmony usually has different successive chords with the same fundamental note, which modern composers frequently continue through several measures, with a variety of figurative chords. (For the laws of Succession, see HARMONY.)

The above rules apply only to plain harmony. When more complicated discords are used, Ex. 7, page 40, will exhibit such as can be used without preparation on any base note, together with the chord which in most instances necessarily follows the discord : remembering that C the second space in the major key, and A the first space in the minor key, is 1. In general, the A, D, H, and I chords may be used interchangably ; and likewise the inversions of each class, A^1, D^1, H^1, & I^1 ; A^2, D^2, H^2, and I^2 ; that is, where A^2 is found, D^2, H^2 or I^2 may be used in its place, and *vice versa*. In the same manner, the B and E chords may be interchanged ; and also the C, F and G chords.

II. TO ANNEX FIGURES TO A BASE, is to place over or under a base the figures which denote the

several intervals of the chord to be played above the base. All the intervals are not figured, but enough figures are employed to denote the chord to be used.

Rule 1. The common chords viz. A, B, &c. (see CHORDS,) whose intervals are 3, 5, and 8, have necessarily no figures; but may be denoted by either one or more of these figures. When a common chord follows an inverted chord, or a suspension &c. some figures are commonly used.

Rule 2. The first inversion of the common chords, viz. A^1, B^1, and C^1, called the chord of the 6th, whose intervals above the base are 3, 6 and 8, or 6, 3 and 6, or 3, 6, 3, is figured 6; but either of the other figures may be used with it.

Rule 3. The second inversion of the common chords, viz. A^2, B^2, and C^2, called the chord of the 4th and 6th, whose intervals are 4, 6, and 8, is indicated by the figures, $\frac{6}{4}$.

Rule 4. The chords of the seventh, viz. D, E, F, and G, whose intervals are those of the common chord, with the addition of the seventh, are figured 7; but either of the figures belonging to the common chord may be used with it.

Rule 5. The first inversion of the chords of the seventh, viz. D^1, E^1, F^1, and G^1, called the chord of the 5th and 6th, whose intervals are 3, 5, 6, and 8, is indicated by the figures $\frac{6}{5}$. The sixth of this chord is often omitted; it is then marked 5, or $\natural$5.

Rule 6. The second inversion of the chords of the seventh, viz. D^2, E^2, F^2, and G^2, called the chord of the 3d and 4th, whose intervals are 3, 4, 6, and 8, is indicated by $\frac{4}{3}$. The fourth is often omitted, it is then marked 6 or $\natural$6.

Rule 7. The third inversion of the chords of the seventh, viz. D^3, E^3, F^3, G^3, called the chord of the 2d and 4th, whose intervals are 2, 4, and 6, is figured 2, or $\frac{4}{2}$.

Rule 8. The chords of the ninth, viz. H, and I, whose intervals are 3, 5, 7, and 9, the same as the chords of the seventh, except 8 is taken 9, are figured $\frac{9}{7}$. The fifth is usually omitted. The ninth in this chord may be regarded as the suspension of the eighth.

Rule 9. The first inversion of the ninth, viz. H^1, and I^1, whose intervals are 3, 5, 6, and 7, is marked $\frac{7}{6}$. The sixth in this chord is almost always omitted, it is then marked $\frac{5}{}$ 7.

Rule 10. The second inversion of the ninth, viz. H^2, and I^2, whose intervals are 3, 4, 5, and 6, is marked by all these figures. The fourth is omitted, and then it is figured $\frac{6}{5}$.

Rule 11. The third inversion of the ninth, viz. H^3, and I^3, whose intervals are 2, 3, 4, and 6, is figured $\frac{4}{3}$. The second is omitted, and then it is $\frac{4}{3}$.

Rule 12. The fourth inversion of the ninth, viz. H^4, and I^4, whose intervals are 2, 4, 6, and 7, is marked with all these figures. The seventh is omitted, and then it is figured $\frac{4}{2}$.

Note. 1. Every interval affected by an accidental flat, sharp, or natural, must have the accidental prefixed to the figure; as, in chords G, G^1, G^2, I^2, I^3, and I^4; a flatted 5th is sometimes marked ♭5, and a sharped 6th or 4th, 6+, 4+ or ♯6, ♯4.

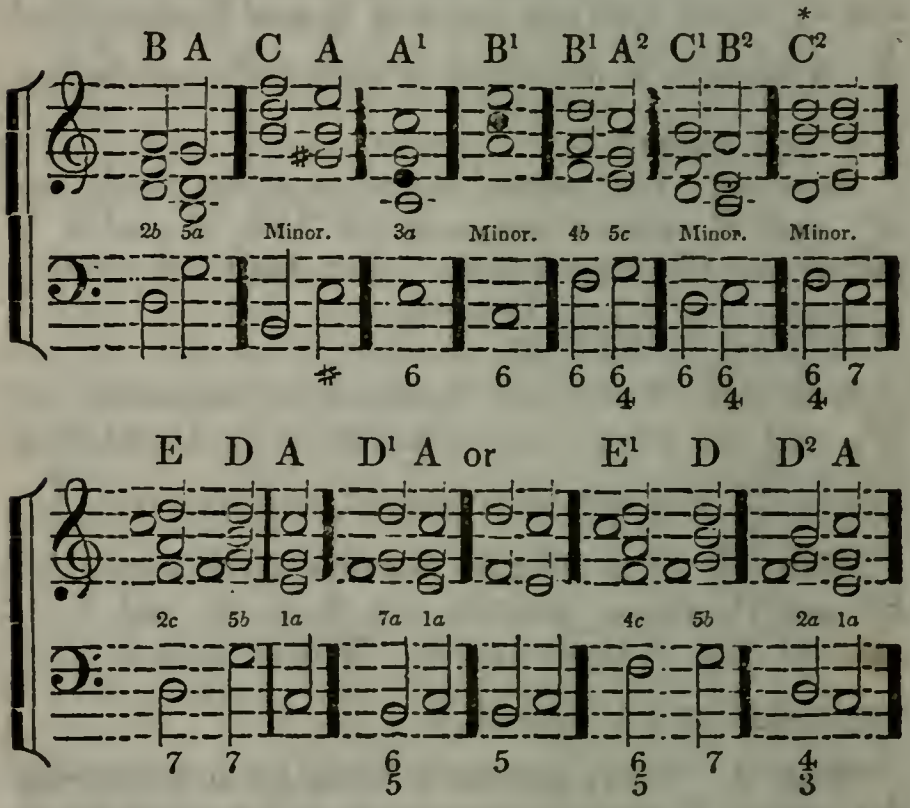
Note 2. An accidental standing alone denotes a third affected by the accidental; as in chords, G^2, I, &c.

Note 3. A series of 3s without other figures, denotes that no interval but a third or third and octave is to be played.

Note 4. *T. S.* or *Tasto Solo*, signifies that no chords or notes are to be played with the right hand.

Note 5. *Unison* implies that no notes are to be taken but octaves.

Ex. 7. Table of natural chords, with the figures which designate each.

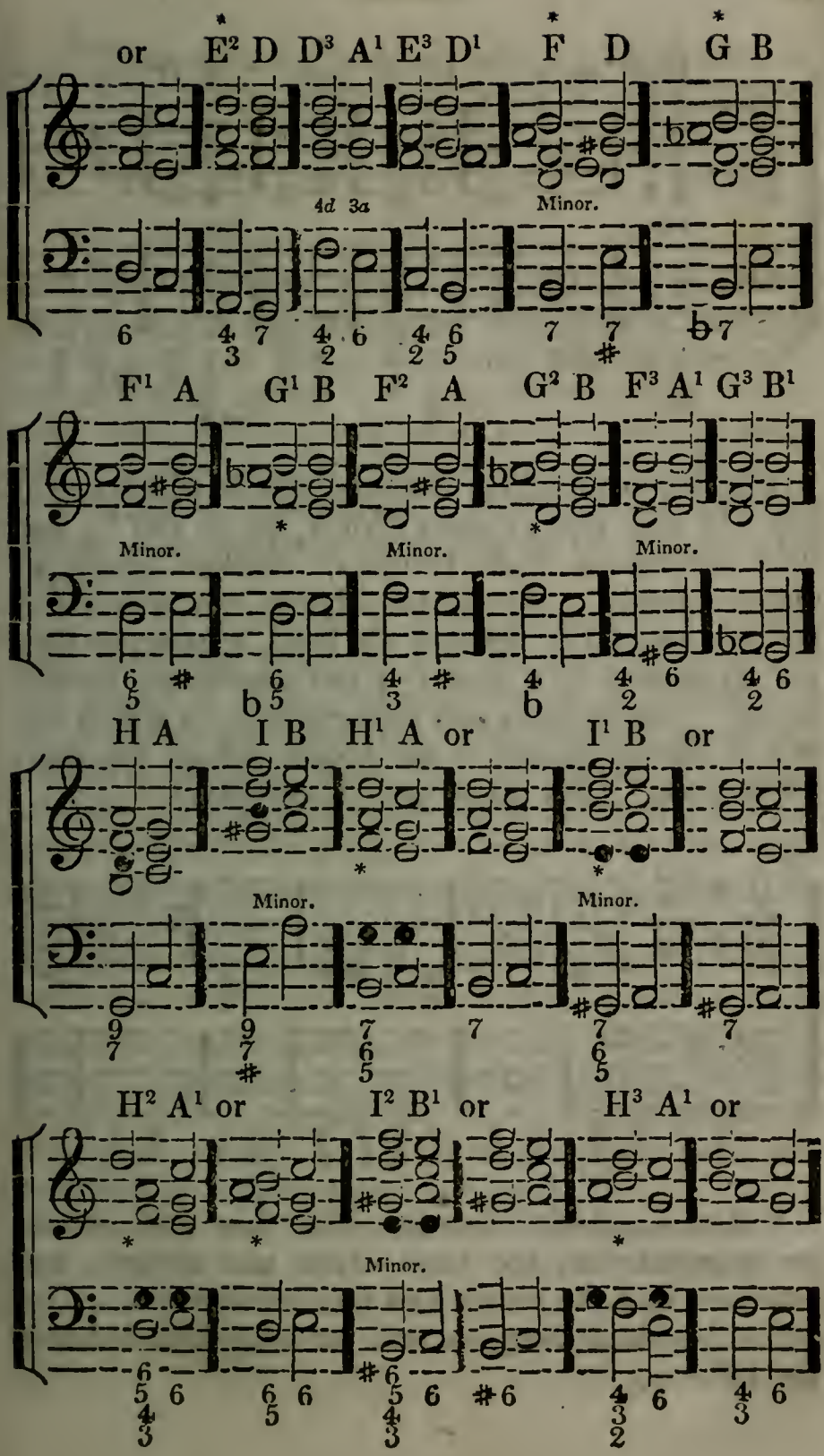

B A C A A¹ B¹ B¹ A² C¹ B² C²*
2b 5a Minor. 3a Minor. 4b 5c Minor. Minor.
6 6 6 6 6 6 6 7
4 4 4
E D A D¹ A or E¹ D D² A
2c 5b 1a 7a 1a 4c 5b 2a 1a
7 7 6 5 6 7 4
5 5 3

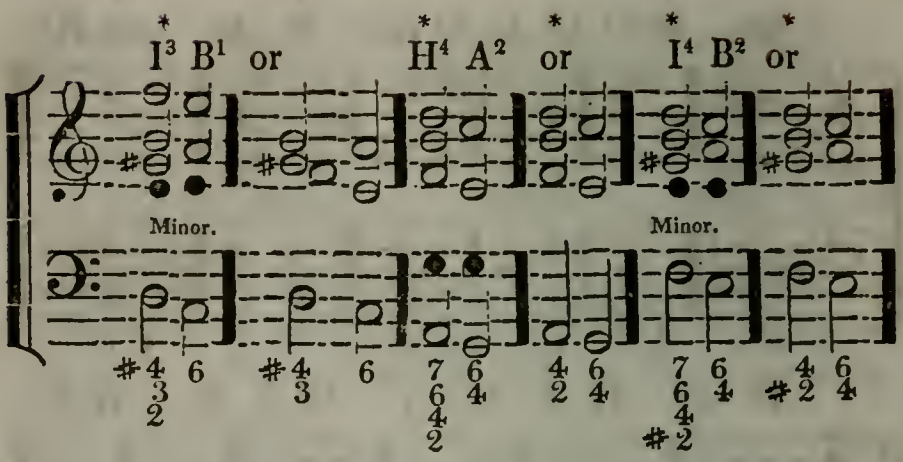
* Signifies that those chords are little used.

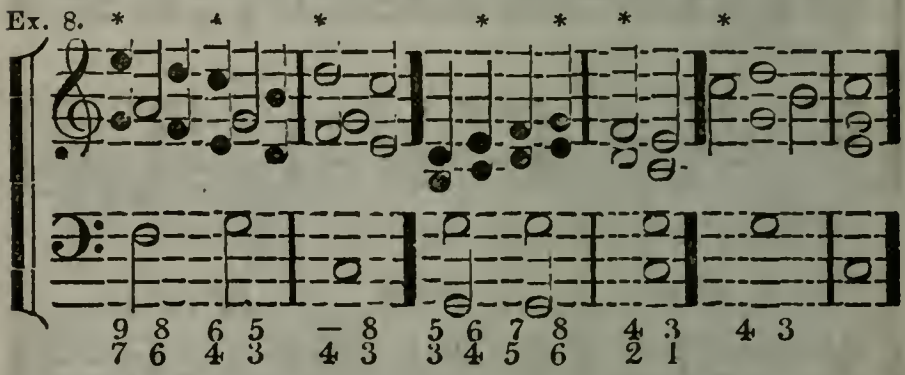
Those marked "minor" belong to the minor key.

The black notes are those which are usually omitted in composition.

The first chord in each example is the one designed particularly to illustrate the rule: and the second chord the one which usually must follow it in harmony. (See Harmony, and Ex. 6 above.)

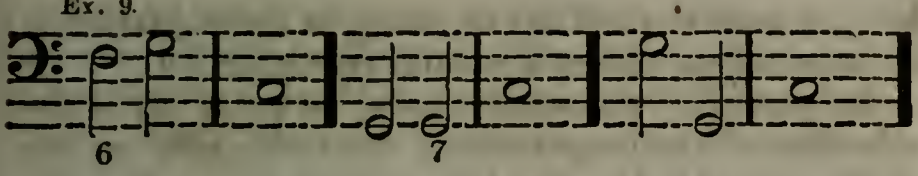

or E² D D³ A¹ E³ D¹ F D G B
4d 3a
Minor.
F¹ A G¹ B F² A G² B F³ A¹ G³ B¹
Minor.
Minor.
Minor.
H A I B H¹ A or I¹ B or
Minor.
Minor.
H² A¹ or I² B¹ or H³ A¹ or
Minor.



The above are all the essential chords which are in use. In fact, other chords than A, B, D, and E, and their inversions, (see CHORDS,) seldom occur in church music. *Accidental* chords are sometimes entirely omitted in figuring the base, sometimes they are expressed by a dash (–) and sometimes figured in full. Suspensions and appogiatures, in which two sets of figures appear at one chord, are of the most importance. (See *Figurative* HARMONY.)

* Are accidental chords. The first and second are appogiatures; the third, sixth, and seventh, suspensions, and the fourth and fifth transitions.

Taking these away, we have for the essential chords the following.

Ex. 9.



The accidental notes if noticed, are figured according to their intervals; and to get the run, the essential notes from which they borrow their time, are also figured; to fill up the chords, the other notes of the essential chords are used, whether they harmonize with the accidental notes or not; and if necessary are also figured. (See *Accidental* CHORDS.)

4 followed by 3 always indicates the common chord, with the third suspended by the fourth in the first chord.

III. TO PERFORM A FIGURED BASE. A figured base considered practically, is a base to which figures are annexed, either above or below, to indicate the accompanying harmony above the base, to be played chiefly by the right hand: or, more generally, a figured base is a base consisting of the lowest notes of the several chords of a tune; that is, the common base above which the various chords are to be taken. To know what chord is indicated by the figures, see Chords or Ex. 7, page 40. To accompany the base notes with the proper chords, without figures expressed, we must be familiar with every chord belonging to each base note, as explained in the previous article, (see Ex. 5, page 36.) To do this, those chords should be written out in all the common keys, and arranged in regular order on a card.

We must also be familiar with the progressions in harmony; or the chord which succeeds any particular chord. (See Ex. 6 & 7 above, and HARMONY.) Observe, the chords are to be taken according to the

key ; a note marked flat or sharp in the signature is to be so taken, unless a natural contradicts it.

In practice, we usually have, to guide us in the selection of the proper chord, the treble note as one of the intervals above the base, commonly taken the upper note of the chord : and the other intervals are taken between the treble and the base. In Old Hundred, for instance, we have the following.

Rule	1*a*	1*a*, 5*a*	6*b*, 3*a*	6*b*, 5*a*	1*a*	1*a*	1*a*	5*a*, 6*b*	4*a*, 1*a*	5*a*
Treb.	8	8 3	8 3	3 5	3	3	3–	5 3	8 3	5
Alto	5	5 – 8	5 – 8	–5 8	–5	8	8–	–3 8	–5 – 8	3
Tenor	3	3 5	3 – 6	–3 3	–8	5	5–	–8 5	3 5	–8
Base	T.	T. D.	Sm. M.	Sm. D.	T.	T.	T.-	D. Sm.	Sd. T.	D.

6*b*	5*a*, 1*a*	5*a*, 3*a*	4*a*, 5*b*	1*a*	1*a*	1*a*, 6*c*	5*a*, 2*b*	3*a*,5*b*	1*a*
3	5 3	5 6	3 3	8	5	3 3	5 3	8 5	8
8	3 8	3 – 3	3 8	–5	8	8 – 3	3 5	3 7	3
5	8 – 5	–8 6	–5 7	3	3	5 – 6	8 5	6 3	8
Sm	D. T.	D. M.	Sd. D.	T.	T.	T. Sm.	D. St.	M. D.	T.

The dash – shows that the notes after it, are in the preceding chord. T. stands for tonic, D. dominant, Sm. submediant, &c.

The chief thing to be guarded against, in playing harmony to a given base or treble, or in arranging an alto and tenor, is not to have two consecutive fifths or octaves occur between two successive notes in the same parts and moving in similar motion. (See CONSECUTIVE & MOTION.)

We are exposed to consecutive fifths and octaves :

(1) When the two successive base notes have common chords.

(2) When the fundamental notes of the two successive chords are on conjoint degrees.

(3) When the base and treble move at thirds from each other.

To obviate these difficulties, one or both of the intermediate parts must have a different motion from the base and treble, or take a discord.

Let us apply this to Old 100. The first five chords have no difficulty. The sixth chord is exposed to (^{3}); should the alto take 8 and the tenor 5, there would be consecutive octaves between the alto and base. To obviate this, the chord of the sixth has usually no 8. But, as it appears necessary here, we take an oblique motion, and let the alto stand and double 3. The next danger is at the seventh note of the third line, exposed to (^{1}) and (^{3}); if, in the previous chord, we had taken the alto 8, and in this, the alto 8 and tenor 5 the most natural notes, we had had consecutive 8ths between the base and alto, and fifths between the base and tenor. The former we obviate by taking the previous alto 3, and the latter by taking the tenor 7 and omitting the 5. The only other danger is at the sixth note fourth line, exposed to (^{2}). Had the previous tenor been 8, there would have been consecutive fifths between the alto and tenor, which is obviated by doubling 5 in the previous chord. We can proceed in this way, and figure or harmonize any given base; following the above rules and guarding against the above dangers. We take the *a* chords unless we have some reason to the contrary, in Ex. 6 and 7, or in the treble.

Fundamental BASE, the base which consists of the fundamental notes of the several chords, from which the harmony is derived. (See *Theory of* Chords.) The fundamental note of all the direct chords, viz. A, B, C, D, &c. is the lowest note; the fundamental note of all the first inversions, viz. A^1 B^1, D^1, &c. is a third below the lowest note of each; of the second inversions, viz. A^2, B^2, D^2, &c. it is a fifth below; of the third inversions, viz. D^3, E^3, &c. it is a seventh below; and of the fourth inversions, viz. H^4, and I^4, a second or rather a ninth below. To derive figurative harmony from a funda-

mental base, constitutes the scientific part of composition. (See *Figurative* Harmony.)

Ground BASE, properly the fundamental base; but formerly used as a subject repeated to different harmonies. (See *Constrained* Base.)

Thorough BASE, a base continued through. The art of accompanying the base notes of a piece of music with proper chords, including the theory and practice of figured base. (See *Figured* Base.)

BASE CLEF NOTE, that note which is placed on the same line as the base clef. F is the base clef note.

BASE COUNTER, } the under base. That
Contra BASE, } part which, when there are two bases in a composition, is performed by the double bases; the violincellos taking the upper base. (See Basso concertante.)

BASE VIOL, a term commonly applied to the violincello. It properly means an instrument of the violin kind, but much larger, mounted with from four to eight strings, formerly very fashionable, but at present hardly known. (See Viola da gamba.)

BASIST, a base singer.

BASS. (See Base.)

BASSE CHANTANTE, (Fr.) singing or melodious base; a figurative base. When there are two bases, *basse chantante*, means the upper; and by instruments is performed on the violincello.

BASSETTO, (Ital. dimin. of *basso*,) a tenor or small base viol. (See Viol.)

BASSISTA, (Lat.) a base counter singer, or one who takes the lowest part.

BASSO, (Ital.) base.

Col BASSO, (Ital.) with the base. Written on the tenor, it denotes in unison with the base.

BASSO CONCERTANTE, (Ital.) the base which

accompanies the softer parts of a composition, generally taken by the violincello.

BASSO CONTINUO, (Ital.) thorough or continued base. (See THOROUGH BASE.)

BASSO RECITANTE. (See BASSO CONCERTANTE.)

BASSO RIPIENO, (Ital.) full base; the base which joins in the full parts of a composition, and by its depth of tone, gives a powerful contrast to the softer passages. Opposed to *basso concertante.*

BASSOON, a wind instrument, which plays the base to the clarinet, and hautboy. It consists of a long tube doubled near the centre, so as to allow the thumbs to play several low notes. I tis blown with a reed through a brass tube. Its compass is three octaves from double B flat, to B flat on the third line of the treble staff. When well played, its tones are sweet and plaintive, and make a good accompaniment; but if not well managed, its tones are coarse and disagreeable. It is one of the most important and effective instruments in the band; and, by the modern additional keys, may be made a very accurate accompaniment to vocal music. It is supposed to have been introduced into England by Handel, about 1720. For its scale and the manner of managing it, see WIND INSTRUMENTS.

BASSOONIST, a performer on the bassoon.

BASTA, } (Ital.) enough, stop.
BASTANTO, }

BATTUTA, (Ital. time,) beating time.

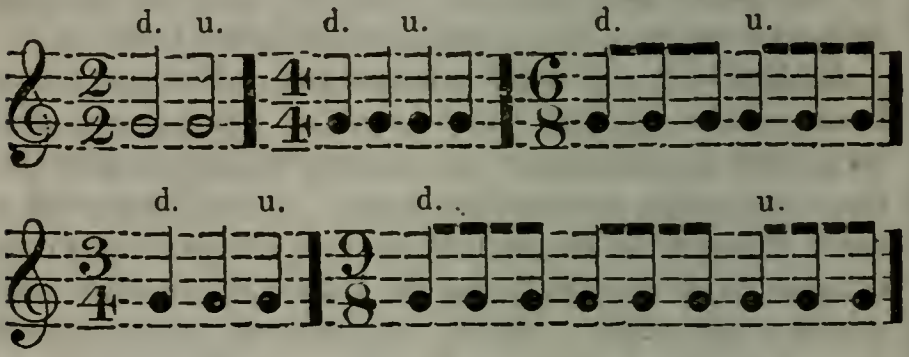
A BATTUTA, in time, by beats; occurring after a recitative, or *ad libitum.*

To BAWL, to exceed the natural volume of the voice.

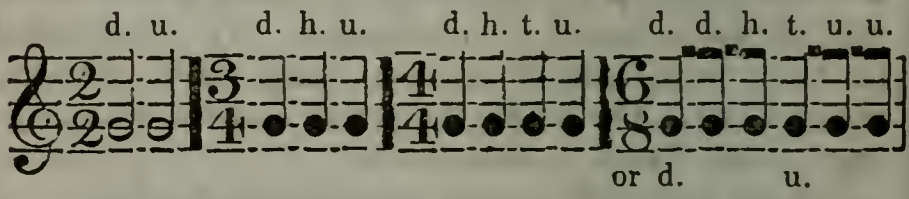
BEAT. (See ORNAMENTAL NOTES.)

BEATING TIME, marking the parts of measures

by a quick motion of the hand or foot, in order to insure a simultaneous and exact performance of a musical composition. The beat is always downward on the first or accented part of the measure. With the foot there are two beats: in even time, down on the first part of the measure, and up at the middle; in odd time, down on the first and up on the third. Ex:



With the hand, each part of the measure has a distinct beat. There are four different motions of the hand in use; viz. downward, hither or left, thither or right, and upward; they are applied as follows:



BEATS, } The flutterings or throbbings pro-
BEATINGS, } duced by continued sounds which are not in tune and whose vibrations do not coincide. Conceive two strings, exactly equal and similar and equally drawn out from a straight line, to be let go at the same instant; and suppose one of them to make 100 vibrations in a second, and the other 101; let them be placed side by side, and at the same distance from the ear. The first vibrations will con-

spire in producing a sound of double intensity. But at the 50th vibration, one has gained half a vibration of the other, so that the pulsations of the air proceeding from either string are not now in the same but in opposite directions; and the two being of equal intensity will, instead of conspiring, exactly destroy each other; and this will be the case for several vibrations on each side of the 50th. Consequently in approaching the 50th vibration, the joint sound will be enfeebled; then a moment of silence, and then the sound will increase until the 100th; when one string having gained a whole vibration on the other, the pulsations will again completely conspire, and the sound will attain its maximum. The effect on the ear will therefore be that of an intermitting sound, alternately loud and soft. These alternate augmentations and diminutions of sound are called *beats*. The nearer the sounds of the strings approach to perpect unison, the longer is the interval between the beats. When the unison is complete, no beats are heard. On the other hand, when it is very defective, they have a jarring effect of a very unpleasant kind. The complete destruction of beats affords the best means of attaining by trial perfect tune. Beats will likewise be heard when other concords as fifths are imperfectly tuned; but with less distinctness than in the case of unisons, or octaves.

BELL, an instrument of percussion, and immense vibration, made of a mixture of tin and copper: it is of great antiquity. In the ninth century, bells were introduced into the eastern churches. (See CHIMES.)

BELL OF A HORN, CLARINET, &c. the large open part from which the wind issues.

BELLOWS, a well known pneumatic machine, used to compress and give elasticity to the air in the wind box of an organ. (See ORGAN.) It consists,

like a smith's bellows, of two parts; the lower, to which the handle is attached, having a valve opening inward, to admit the external air; and the upper, which receives the air from the lower by a valve opening upward and is connected by a tube with the wind box. The top of the upper part is moveable, and loaded with weights to produce a constant pressure into the wind box, that the air may rush into the pipes when opened by means of the key.

BELLY. (See SOUNDING BOARD.)

BEMOL, (Fr.) B flat.

BENE, (Ital.) good, well.

BENE PLACITO, (Ital.) at pleasure. The performer may vary and ornament the passage over which these words occur.

BEN MARCATO, (Ital.) well marked, with full toned accent.

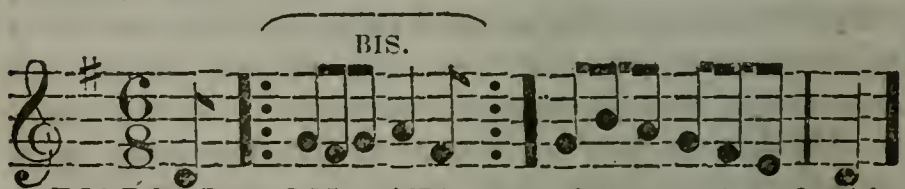
BI, formerly used in solmization instead of *si*.

BINARY MEASURE, double measure.

BIND. (See SLUR.) A term sometimes used for a harvest song.

BIRD ORGAN, a small barrel organ, whose tones in their quality resemble the notes of birds; used in teaching birds to sing. (See MUSIC OF BIRDS.)

BIS, (Lat.) twice; this word is commonly written within a curved line, and denotes a repetition of the melody: sometimes small dots are used in connexion with it. Ex:



BISDIAPASON, (*Bis*, and *diapason*,) a double octave.

BIZZARRO, (Ital.) whimsical, fantastical, according to the carelessness or whim of the composer.

BLACK BOARD, a board about 5 feet by 3, blackened without glistening, across which the staff is several times drawn in white lines; used by music teachers to communicate ocular instruction to their pupils. See "Manual of Instruction."

BOLLERO, a national Spanish dance.

BOMBARDO, an ancient wind instrument made of wood, resembling a bassoon.

BORDER TUNES, tunes supposed to have been composed on the borders of Scotland.

BOURDON, (Fr.) a continued pedal base sound, accompanying a melody moving above, like the drone of a bagpipe. An organ stop. (See BURDEN.)

BOUREE, (Fr.) a lively air for dancing, common in the French province Auvergne.

BOW, a round stick with projections at each end, to which horse hairs extending the whole length are attached. The hairs are drawn horizontally across the strings of a violin and similar instruments, to set them into a vibratory motion. To produce friction, the hairs are roughened with rosin. The length of the bow for a violin is now about twenty eight inches; for larger instruments somewhat shorter.

BOW-HAND, the hand which uses the bow.

BOWING, management of the bow. The skill in performing on a viol, depends chiefly on the bowing.

BRACE. (See CHARACTERS.)

BRAVO, (Ital.) well done; an exclamation implying admiration.

BRAVURA, (Ital. spirit,) an air in which are passages formed of rapid notes, composed for the purpose of showing both the flexibility of the voice, and ability of the singer. (See ARIA.) It is the highest species of song, in which the voice is called on to

move us more by its vocal powers than by the words. Many bravuras occur in Handel's compositions.

TAKING BREATH. Rests in music have the same place as pauses in reading. Care should be taken not to breathe at such places as will interrupt the sense of the words. But little breath is needed to sustain a sound. It is the vibrations of the air, not its passage through the mouth, which produces the sound. The less air passes the clearer the sound. Much can be gained by judicious practice. We are often surprised at the long breath of some professional singers. This is not because they inhale more air than others, but that they have the faculty of keeping up the vibrations with but little escape of the air. For particular directions on this subject, see "Manual of Instruction in the Elements of Vocal Music."

BREVE. (See CHARACTERS.)

BRIDGE, a perpendicular arch, standing on the sound-board of all stringed instruments; on which the strings are stretched, supported, and tuned, and their vibrations communicated to the sound-board. The bridge should be of hard wood, and touch the sound-board as little as possible, in order not to interrupt the vibrations and deaden the sound. (See VIOLIN.)

BRILLANTE, (Ital.) brilliant; in a gay, showy, and sparkling style.

BRIOSO, } (Ital. mettle, fire,) with spirit and
CON BRIO, } animation.

BRODERIES, (Fr.) ornaments, flourishes.

BROKEN CHORDS, are opposed to such as are struck simultaneously. (See ARPEGGIO.)

BUCCINA, a military wind instrument of high antiquity, supposed to be a kind of circular trumpet like the French horn.

BUCOLIC, an ancient shepherds song.

BUFFO, (Ital.) comic. (See ARIA.)

BUGLE, } a straight wind instrument
BUGLE HORN, } used in military bands. The bent bugle with keys, has become a very useful instrument. (See HORN.)

BURDEN, in a song, is a constant recurrence to the theme at the end of each verse.

BURLETTA, (Ital. *burlare* to joke,) a comic species of musical drama.

C.

C. The first note of the natural scale; which the Italians name *do*, and the French *ut*.

C, denotes quadruple time. (See MEASURES.)

C. 1 and C. 2, canto first, and canto second.

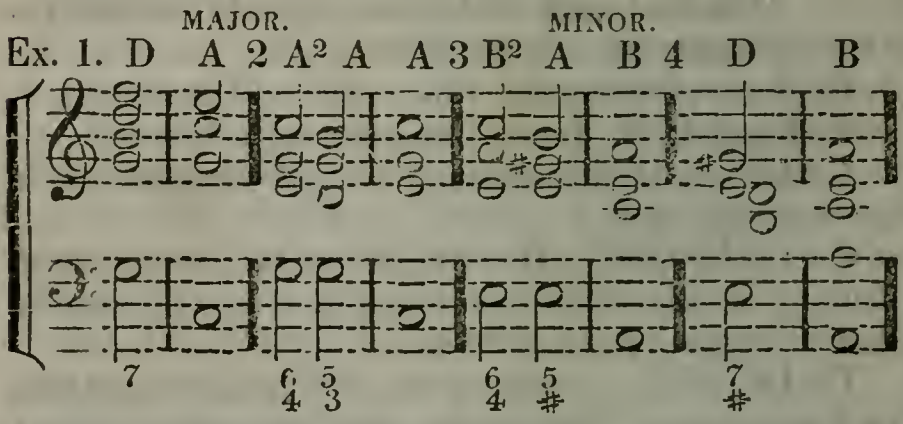
CACCIA, (Ital. hunting,) a light composition in the hunting style.

CACOPHONY, (Greek, *kakos*, bad, and *phonee*, sound,) a discordant combination of several sounds, badly chosen, or out of tune.

CADENCE, a termination of a musical sentence or a movement, formed by two successive chords. Cadences in music correspond to pauses in speaking. They are necessary to give relief to the ear and to the voice. Like pauses, they are of various kinds, and more or less conclusive. Cadences terminate with an accented chord satisfactory to the ear, and preceded by a chord usually dissonant, which leads the ear to expect a close. If the close is perfect, it takes place on the tonic chord, preceded by the

chord of the fifth, which, from its leading quality, is called the dominant. This dominant chord is usually the chord of the seventh, Ex. 1; or preceded by a $\frac{6}{4}$ chord, Ex. 2. When the last chord is dissonant, Ex. 9 and 10; or is based on the sixth, Ex. 12 and 14; the cadence is interrupted, and the ear waits for a perfect cadence to succeed, Ex. 11 and 13. Imperfect cadences usually terminate on the fifth with the common chord, Ex. 15; but may take place on any base note having the common chord and preceded by a chord which has its fundamental note a fourth below or a fifth above, Ex, 23 and 24. The cadences are usually classed thus:

1. Perfect cadence, when the dominant of the base is followed by the tonic, each with its fundamental harmony. Ex. 1 to 4.

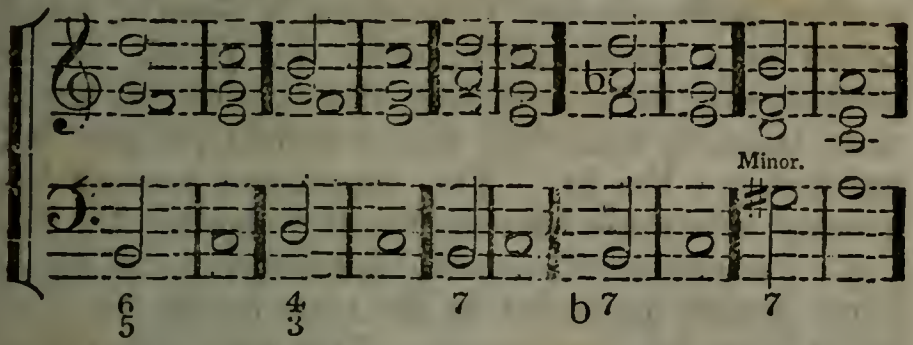


This is the *final cadence*, and used at the end of every movement, and of the piece.

The chords are lettered according to classes. (See Chords.) To make the dominant more discordant, observe, that the H and I chords may be used for the A and D chords; and so below.

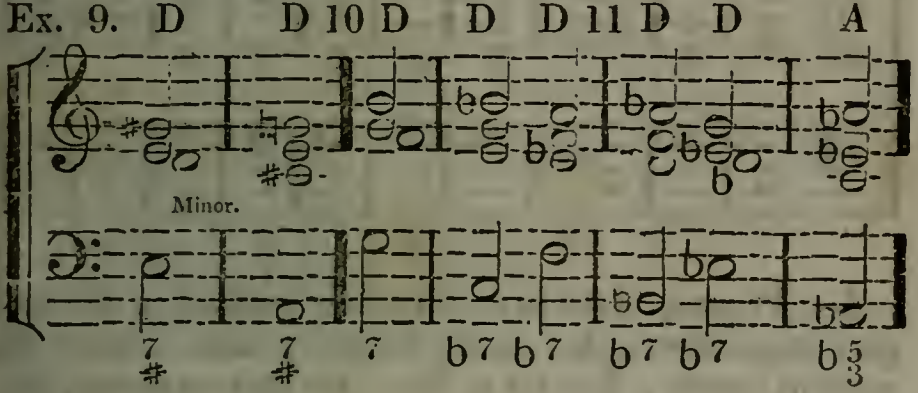
When the dominant chord is inverted, the cadence is still perfect but not final. Ex. 5 to 8.

Ex. 5. D¹ A 6 D² A 7 H¹ A 8 I¹ A I¹ B



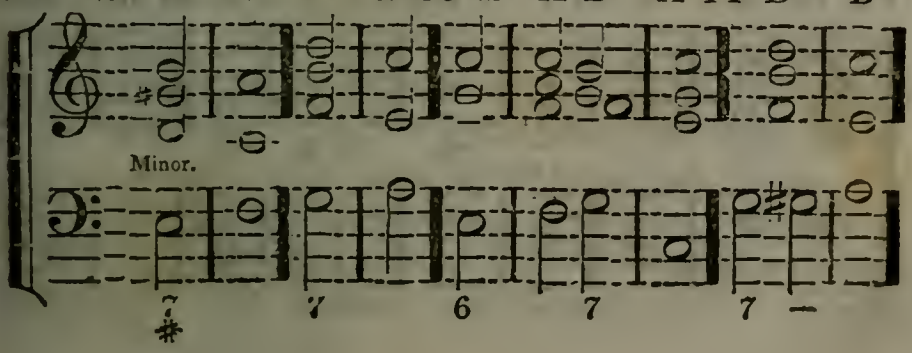
2. Avoided Cadence, when the cadence is suspended by the introduction of a discord on the tonic; Ex. 9 and 10. A series of avoided cadences may succeed each other; Ex. 11.

Ex. 9. D D 10 D D D 11 D D A



3. False Cadence, when the dominant ascends a degree to the submediant or relative minor. Ex. 12.

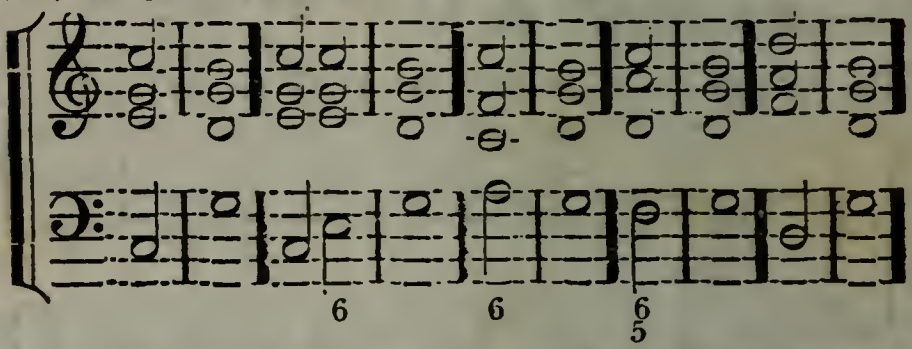
Ex. 12. D A D B 13 A¹ A D A 14 D B



The term *false cadence* arises from this; that frequently, before the final termination, a piece of music comes to a momentary close on this chord, which pleases only for a short time, but requires the strain to be taken up again and closed as usual, to give full satisfaction; Ex. 13. The diminished seventh frequently intervenes between the two chords; Ex. 14.

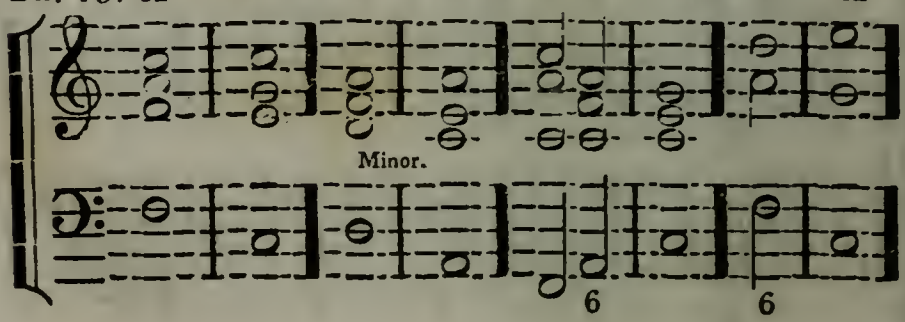
4. Imperfect Cadence, terminates on the dominant, usually preceded by the tonic chord, Ex. 15; better when the first inversion of the tonic intervenes, Ex. 16. Other chords may precede; Ex. 17 and 18.

Ex. 15. A A 16 A A¹ A 17 A¹ A 18 E¹ B

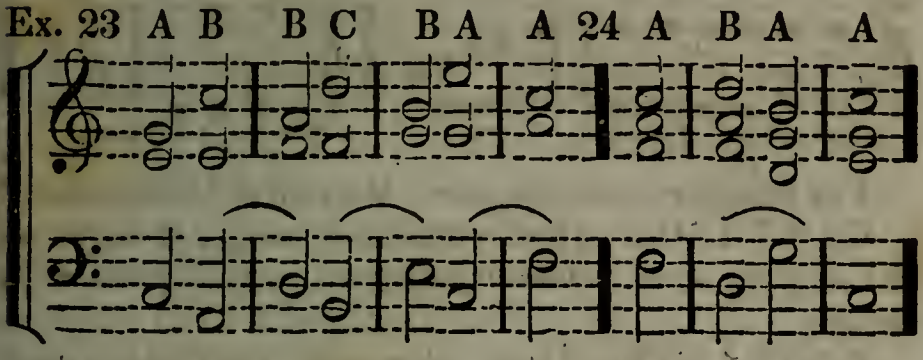


5. Plagal Cadence, precisely similar to the imperfect cadence, but more limited; used chiefly in ancient music; Ex. 19 to 22. In this cadence, the base generally descends from the subdominant to the tonic; Ex. 19 and 20. The best is Ex. 21, which is used in modern church music.

Ex. 19. A A 20 B B 21 A A¹ A 22 B¹ A



6. INTERMEDIATE CADENCE, a progression by fourths upward, or fifths downward, for a momentary pause, Ex. 23; or, to prepare the ear for the dominant seventh, and the final close; Ex. 24.



A great part of musical skill depends on the proper conducting of cadences. (See HARMONY.) For a clear exposition of cadences, see "Catel's Treatise on Harmony."

CADENZA. (See ORNAMENTAL NOTES.)

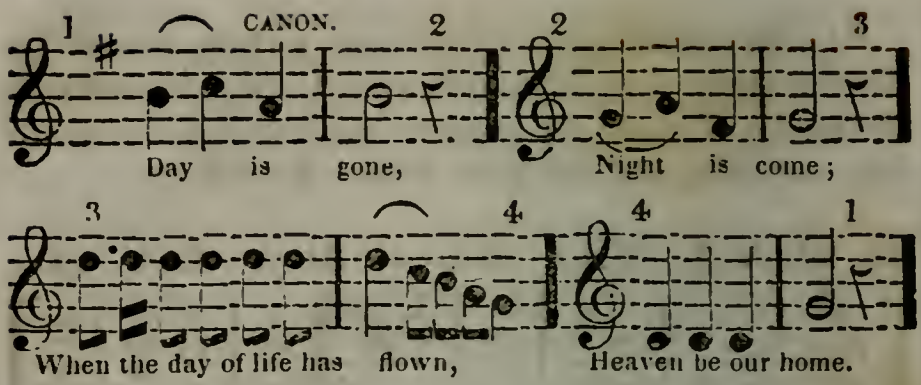
CÆSURA. (See CESURA.)

CALANDO, (Ital. *calare*, to decrease,) decreasing; diminishing by degrees, until the sound is nearly lost to the ear.

CAMERA, (Ital.) chamber. *Musica da camera*, music for private entertainment.

CANCELING SIGN, the natural ♮, so called, because it destroys the effect of the previous flat or sharp. (See CHARACTERS.)

CANON, a composition in which the voices begin one after the other, and successively take up the same subjects; and, as each voice finishes, commences anew; thus forming a continual fugue. It may be of two, three, four, or more parts, which are numbered, 1, 2, 3, 4, &c.; when the first voice commences 2, the second commences 1, and so on. Ex: (See ROUND.)



For familiar examples, see "Manual of Instruction."

CANTABILE, (Ital. *cantare* to sing,) in a graceful singing style; smooth, elegant, and replete with feeling.

CANTANTE, (Ital. singing,) the voice part. (*little used.*)

CANTATA, (Ital.) a species of passionate lyric poetry set to music, with rich accompaniments. It consists of an intermixture of airs and recitatives.

CANTATRICE, (Ital.) a female singer.

CANTICLE, a hymn, sung by the Hebrews in honor of the divinity, usually composed in commemoration of some sacred or important event; as the Canticles of Solomon.

CANTILENA, (Ital. a ballad,) the treble melody; the upper part of any harmonized composition.

CANTO, (Ital. a song,) the highest part or melody in chorus music; generally indicated by the C clef on the first line. The word *canto*, when written against the first violin part, shows that the performer must play the notes for the voice.

CANTO CONCERTANTE, (Ital.) treble of the semi-chorus; opposed to *Canto Ripieno.*

CANTO FERMO, the plain ecclesiastical chant, used in the cathedral service, with notes of equal length. The only accidental is B flat; sharps are never used. (See CHANT.)

CANTO FIGURATO, a composition in which the notes are of unequal value; opposed to *Canto Fermo.*

CANTO PRIMO, (Ital.) the first treble.

CANTO RIPIENO, treble of the full chorus.

CANTO SECONDO, the second treble.

CANTUS, (Lat.) (See CHANT.)

CANZONE, (Ital.) any subject in one, two, or three parts, suitable for fugue or imitation. (*little used.*)

CANZONET, (Ital. dimin.) a short song or ballad.

CAPELLA, a church or chapel.

A CAPELLA, } for the church, or in the
ALLA CAPELLA, } church style, without chords.

DA CAPO, (Ital. *capo*, the head or beginning,) from the beginning; denoting that the performer is to return to the first strain, and end with it, or at the word *fine.*

CAPRICCIO, (Ital. freak,) a wild irregular composition, in which the composer follows his fancy and genius. (*little used.*)

CAPRICCIOSO, } (Ital.) performed in a fantas-
A CAPRICCIO, } tic free style; without regard to rules or correct taste.

CARILLONS, chimes of small bells diatonically tuned, on which airs are played by clock work, or by keys. (See CHIMES.)

CAROL, song of praise, exultation, and devotion; ancient ballads sung at christmas by itinerant minstrels. (*not used.*)

CASTANETS, instruments of percussion, composed of two pieces of wood, round, hard and concave; formerly used in dancing, by the Moors and Spanish.

CATCH, a humorous composition, for three or four voices, sung in social circles, so contrived, that the singers catch up each others sentences.

CATENA DI TRILLI, (Ital. *catena*, a chain,) a succession of short shakes on conjoint notes.

CATGUT, a name given to the small violin and violincello strings, made of the intestines of sheep and lambs dried and twisted.

CAVATINA, a short air, with little repetition of the words, and no second part.

CEMBALO, (Ital.) a harpsichord. *A cembalo*, for the harpsichord.

CENTONE, (Ital. patched work,) a motly opera, composed by different masters.

CESURA, (Lat.) the rhythmic termination of a passage consisting of two or three metrical feet; it is the last accented note of a phrase.

CHACONNE, (Fr.) a slow air in triple time, constructed on a constrained base of four or eight measures, which is repeated with varied melodies. It resembles the Saraband, and was borrowed from the Arabians.

CHAIN OF SHAKES. (See CATENA DI TRILLI.)

CHALAMEAU, (Lat. *calamus*, a reed,) an ancient wind instrument superceded by the *hautboy*. The word is also applied to the low and smooth tones of a clarinet.

CHAMADE, (Fr.) a signal sounded by a trumpet.

CHANGES, alterations of the order in which a set of bells is sounded. (See CHIMES.)

CHANT, a sort of melody, somewhat in the talking style, between air and recitative; to which the psalms and other select passages of scripture are sung. Chant, applied to the musical inflections anciently given to reading and speaking, resembles the modern *recitative;* and plain chant is synonymous with *Canto Fermo*, or *choral music.*

The chant may be denominated the simplest form of musical expression; and, in its present charac-

has not varied essentially from its original construction. It is a natural manner of expressing devotional feeling. President Edwards says, 'While engaged in religious exercises, it always seemed natural to me to *sing* or *chant* forth my meditations; or to speak my thoughts in soliloquies *with a singing voice;*' and St. Augustine, after his conversion, says, on entering the church at Milan, where St. Ambrose had introduced the ancient manner of chanting; 'The voices flowed in at my ears; truth was distilled in my heart; and the affection of piety overflowed in sweet tears of joy;' and speaks of the rich consolation which it continued to dispense to the children of God.

The antiquity of the chant is universally admitted. About the middle of the fourth century, St. Ambrose, bishop of Milan, introduced chanting into the services at that place; from whence the practice extended throughout the western branch of the church. He is supposed to have derived it from the Greek fathers. The ancient custom was, for two choirs to respond to each other. This method of chanting was doubtless borrowed from the Hebrew custom of reciting their ritual in a singing tone, which is practised at the present day. We shall speak of the three divisions of chant, *Ambrosian*, *Gregorian*, and *Modern*.

I. Ambrosian Chant. (Lat. *cantus Ambrosianus*.) The most we know of this chant, we derive from history; as but a single specimen, the '*Te Deum*' has come down to us. At the time St. Ambrose was consecrated bishop of Milan, in 374, it appears that the practice of ecclesiastical chanting was falling into great confusion; which induced him to undertake to give a fixed constitution to church music. He had the co-operation of St. Augustine, who wrote a treatise on the subject, in which the passage before quoted, occurs: to which he adds,

'The church of Milan had not before begun to practise this method. It was here first ordered, that hymns and psalms should be sung after the manner of the eastern nations; that the people might not languish and pine away with tedious sorrow; and from that period it has been retained at Milan, and imitated by almost all the other congregations in the world.' St. Ambrose used only the four *authentic* modes; the four *plagal* were afterwards introduced by Gregory.

II. Gregorian Chant, or Plain Chant. The chant, thus established by St. Ambrose, continued in use, with few alterations, until the time of Gregory the Great, who was born about the year 550. He enlarged the former plan, by introducing four new modes into the *Canto Fermo;* and banished the *Canto Figurato*, as being too light, and destitute of that gravity and simplicity, suited to the solemn offices of the church. Gregory established a singing school at Rome, which subsisted 300 years after his death; and also arranged a large volume of chants or anthems, whose character has given name to the species of music. The characteristic of this style of music is its simplicity, which precludes all levity in the composition, and license in the execution. Originally, no chords were used, but all sung the same part. The melody was composed of equal, slow notes, and had but little compass. In modern times, plain simple harmony has been added, which enriches the effect. Its style renders it peculiarly appropriate to sacred purposes, and to congregational singing. At present, this kind of singing is become venerable from its antiquity, and from the use to which it is appropriated. On particular occasions, the Gregorian chant is still used by the Romish church, and heard in all its ancient glory. To ears

long habituated to artificial and refined music, its simple tones may have little charm; but, to one of true elevated taste, it 'both strengthens' as Basil says, 'the meditation or those holy words which are uttered in that sort, and serves also to make attentive, and to raise the hearts of men;' 'a thing' as Hooker adds, 'whereunto God's people of old did resort with hope and thirst, that thereby their souls might be especially edified; and so it fitly accordeth with the apostle's own exhortation, "speak to yourselves in psalms and hymns and spiritual songs, making melody and singing to the Lord in your hearts."'

III. Modern Chant. The chant, as now used, consists of a distinct articulation of a part of a sentence on one note, terminating with a few varying and deliberate chords. To perform chants, the most important requisite is to utter, distinctly and uniformly, the monotonous sounds to the first part of the sentence, a little slower than that of ordinary reading; and to sing the last words in measure. The principal difficulty lies in pronouncing uniformly the words in the first part of the sentence. The only way to accomplish this, is, to make the pauses rather long; and, dividing the simple sentences into clusters of closely connected words, to make a short pause between them, and to give the accented syllables in each of them a good degree of accent. To divide the words into clusters, it will be sufficient usually to make a short pause,

1 Before a preposition;

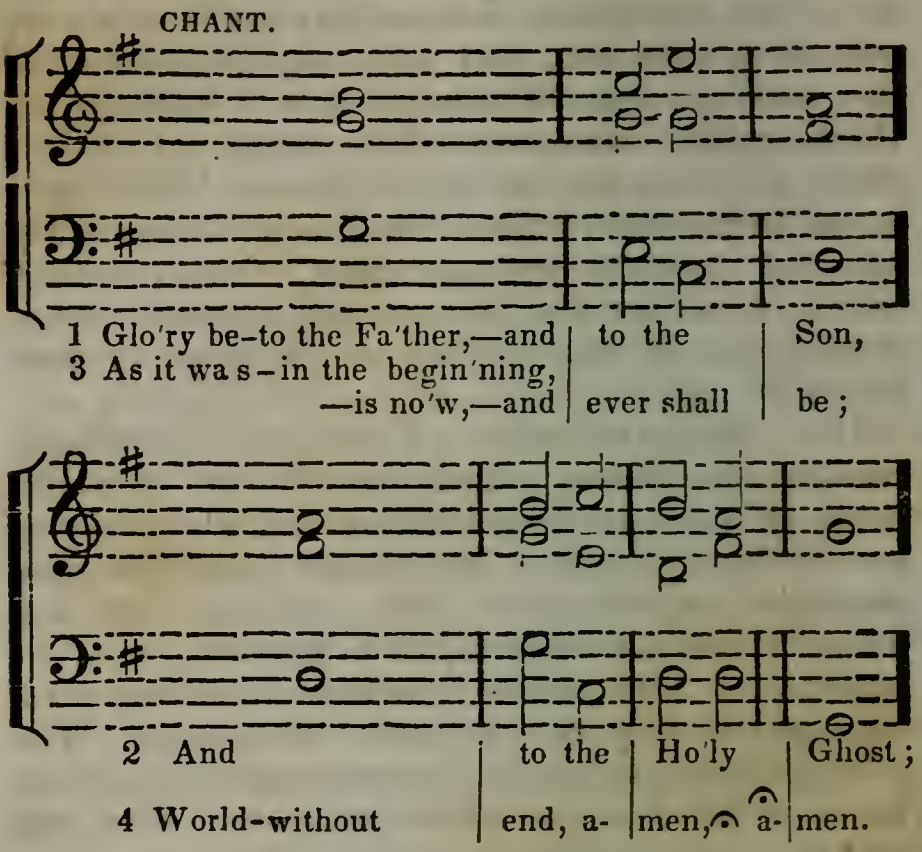
2 Before a conjunction and relative;

3 Before an adjective or participle, which follows its noun;

4 Before and after an adverb or adverbial phrase;

5 Before a verb which is separated from its nominative; and,

6 After a verb which is separated from its object.


CHANT.
1 Glo'ry be-to the Fa'ther,—and | to the | Son,
3 As it was-in the begin'ning,
—is no'w,—and | ever shall | be;
2 And | to the | Ho'ly | Ghost;
4 World-without | end, a- | men, a- | men.

Every voice should pronounce each syllable precisely at the same instant, and at each dash, there should be a momentary suspension, a little longer at the pauses. The leading treble voices, must be the guide, as to the rapidity of the pronunciation. The utmost attention of each performer is required, in order to move with uniformity.

CHANT EN ISON, (Fr.) a chant consisting of only two sounds; used by some religious orders. (*ancient.*)

CHANTANT, (Fr.) in a singing style. (See CANTABILE.) (*little used.*)

CHANTER, a male singer. *The chanter*, the chorister.

CHARACTER, a certain originality, either in the melody, construction of the phrase, or harmonic treatment of a musical composition ; which impresses itself on the ear, the feelings, and the mind of the hearer ; and which gives distinction, power and meaning, to the piece in which it prevails, elevating it above those dull compositions, which are the result of mere study without genius.

Musical CHARACTER, a general name for any musical sign. The following are all the characters used in music. The names are alphabetically arranged, and the characters classified in the table ; pages 67, 69, and 71. The definitions and characters mutually refer to each other.

1 Abbreviation ; Ex. 47. (See Abbreviation.)

2 Arpeggio ; Ex. 48. (See Abbreviation and Arpeggio.)

3 Bar, a perpendicular line drawn across the staff or score, which serves to divide the time of a piece of music into small equal portions called *measures*, and thus to assist in keeping time. Ex. 19.

4 *Broad* Bar, marks the end of a strain or line in poetry. Ex. 20.

5 *Double* Bar, marks the end of a strain, or tune. Ex. 21.

6 Brace, a name given to perpendicular curve lines, drawn at the left hand margin, to connect all the parts that move together. Ex. 27.

7 *Short* Brace, used with a long one, connects the two staffs designed for the organ or piano forte. Ex. 28.

8 Breve, a note equal to two semibreves, used only in choral music. Ex. 4. (*little used.*)

9 Clefs ; Ex. 33. (See Clefs.)

10 Close, sometimes used to mark the end of a tune. Ex. 32.

11 Crescendo, a gradual increasing of the sound. It is applied to a single note or to a phrase. Ex. 41.

12 Crotchet, a note usually occupying the time of a beat, or while the leader counts one. It is equal to one fourth of a semibreve, or to two quavers. Ex. 7.

13 Demisemiquaver, a note equal to one fourth of a quaver, or one eighth of a crotchet. Ex. 10.

14 Diminuendo, a gradual decreasing of the sound; opposed to *crescendo*, (which see.) Ex. 42.

15 Direct, a mark placed at the end of a staff, to point out the place of the first note of the next similar staff. Ex. 35. (*little used.*)

16 Dot, a point placed after a note or rest, which increases its value one half. Ex. 17. It is then called a dotted note or rest.

17 *Double* Dot, two dots after a note or rest increase its value three fourths. Ex. 18.

18 Eighth; Ex. 8. (See *Quavers.*)

19 8va, shows that the notes over which it is written, must be played an octave higher, until the word *Loco* occurs. Ex. 49. (See Ottava.)

20 8vo, written under the base, shows that the base notes must be played double. Ex. 50.

21 Emphasis, stress laid on the unaccented part of the measure; it may be termed *rhetorical accent*, in distinction from common accent which is *grammatical.* Ex. 43. (See Forzando.)

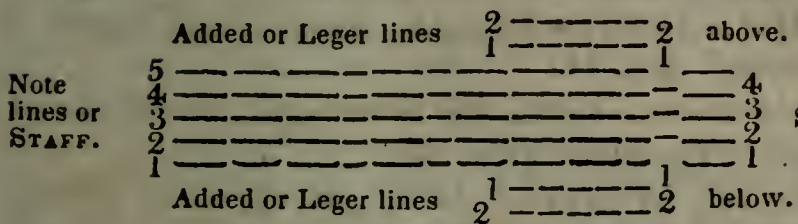
22 Fives, groups of five similar notes equal in value to four. Ex. 38.

23 Flat, the sign of depression, indicating that the notes before which it is placed must be lowered half a tone. Ex. 22.

24 *Double* Flat, shows that the note must be

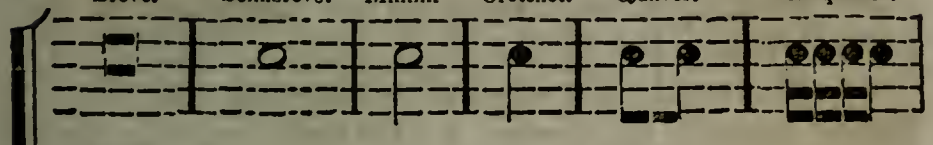
MUSICAL CHARACTERS.

Ex. 1 2 3



NOTES.

Ex. 4 Breve. 5 Semibreve. 6 Minim. 7 Crotchet. 8 Quaver. 9 Semiquaver.



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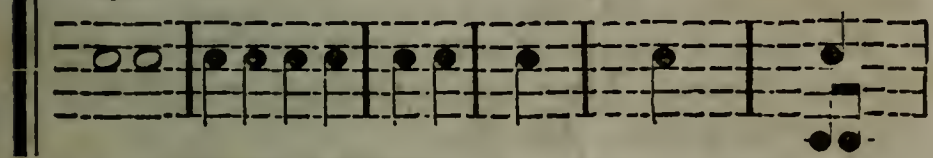
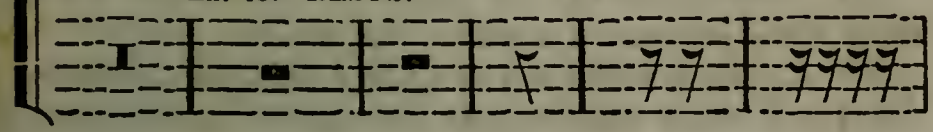
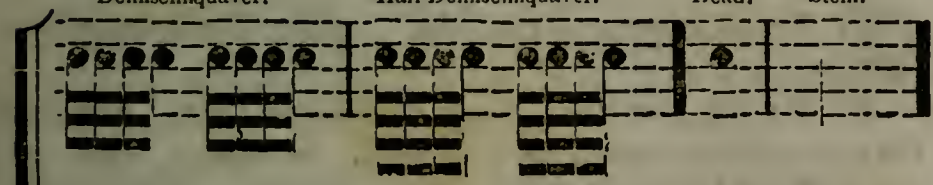


Ex. 15. RESTS.



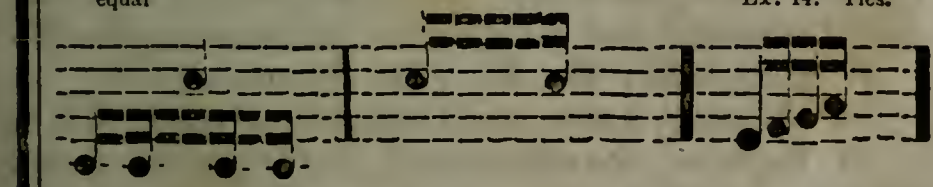
NOTES.

Ex. 10 Demisemiquaver. 11 Half-Demisemiquaver. 12 Head. 13 Stem.

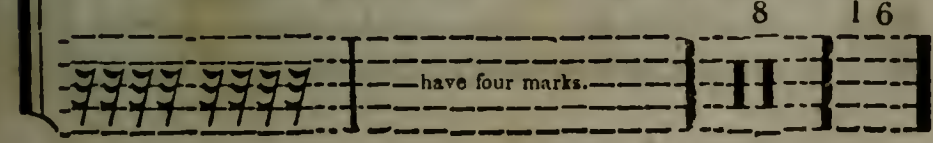


equal

Ex. 14. Ties.



Ex. 15 RESTS. Ex. 16 Rest. 8 Rest. 16



lowered two half tones; which on keyed instruments is the same as the note below. Ex. 23.

25 HALF; Ex. 6. (See *Minim.*)

26 HALF-DEMISEMIQUAVER, equals one fourth a semiquaver. Ex. 11.

27 HEAD OF A NOTE, the round part, which shows the pitch of the note. Ex. 12.

28 LEGER OR ADDED LINES, short lines placed above and below the staff for additional notes. Ex. 2.

29 LINES; Ex. 1. (See *Staff.*)

30 MINIM, a note equal to two crotchets, or half a semibreve. Ex. 6.

31 NATURAL, the sign of restoration; it raises a flatted sound, or lowers a sharped sound, to its natural place. Ex. 26.

32 NINES, groups of nine notes, performed in the time of eight. They are triplets of a triplet with diminished notes. Ex. 40.

33 NOTES, marks of sound; characters which show the duration of sound. Ex. 4, &c.

34 1 AND 2 WITH SLURS, show that the notes under 1 are to be sung before the repeat; and under 2 after the repeat, when those under 1 are to be omitted. Ex. 30.

35 ORNAMENTS; Ex. 46. (See ORNAMENTAL NOTES.)

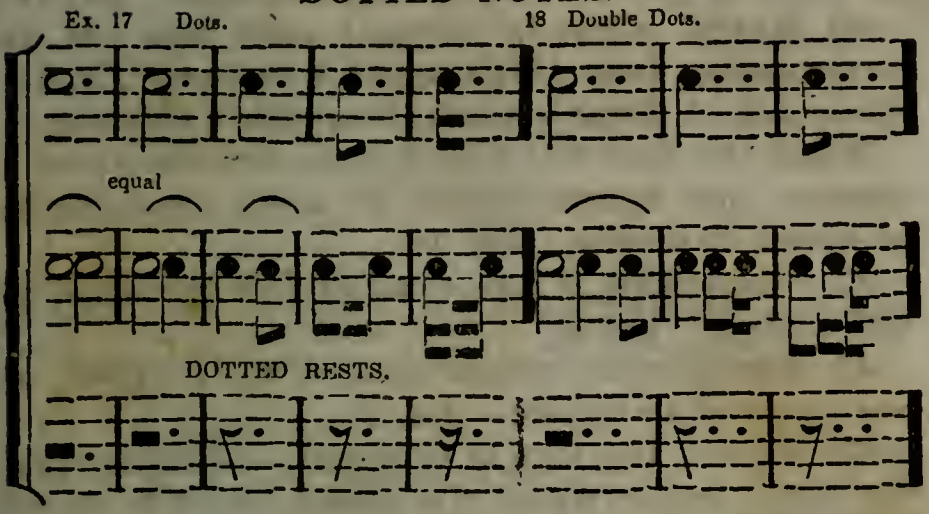
36 PAUSE, written over a note or rest, denotes that it must be prolonged beyond its usual time, at the will of the performer: when written over a double bar, it denotes a rest between the two phrases. Ex. 36.

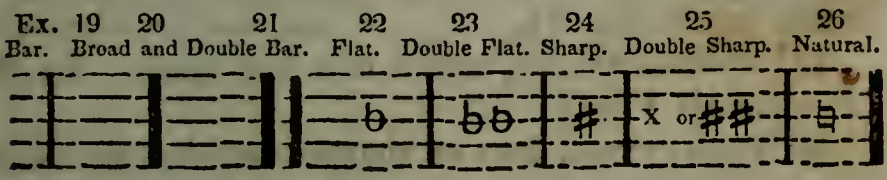
37 QUARTER; Ex. 7. (See *Crotchet.*)

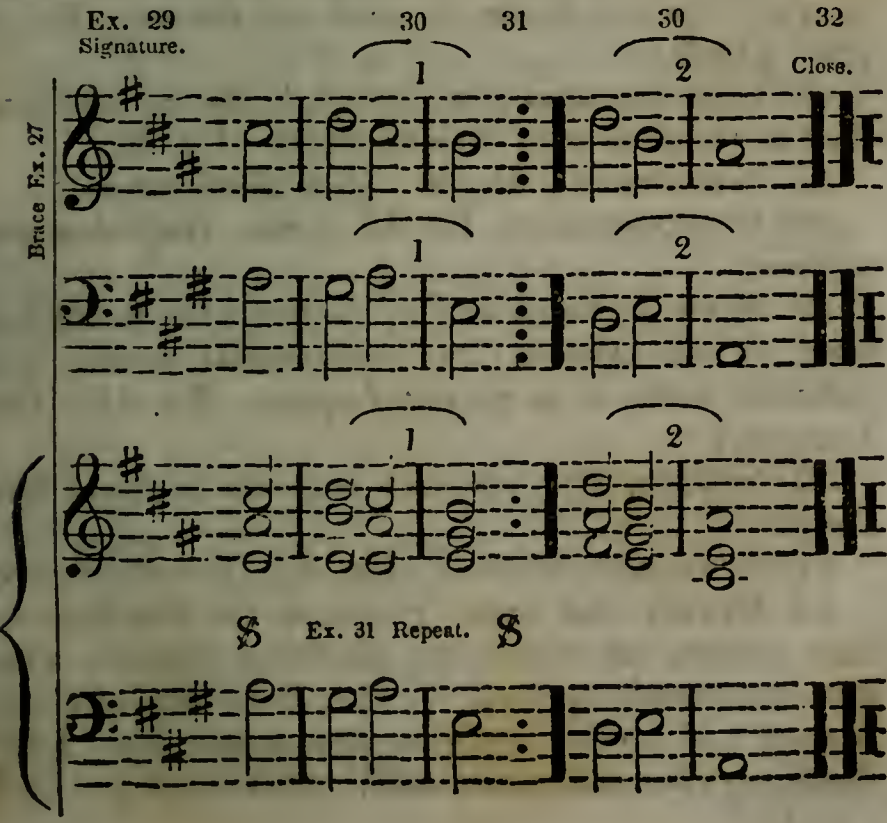
38 QUAVER, a note equal to half a crotchet. Ex. 8.

39 REPEAT, the character 𝄇 or dots, when placed before a double bar, denotes a repetition of the previous strain, or a part of it; when after a double bar, or in the midst of a strain, a repetition of the follow-

DOTTED NOTES.







ing strain or part of a strain from the sign. Ex. 31.

40 Rests, marks of silence; each note has its corresponding rest, which equals it in time. Ex. 15. Exception. A *Semibreve* rest always fills a measure.

When the word *rest* with figures, is written over a measure, the figures denote so many measures to be passed in silence. Ex. 16.

41 Semibreve, a note equal to four crotchets, or half a breve. Ex. 5.

42 Semiquaver, a note equal to half a quaver, or one fourth of a crotchet. Ex. 9.

43 Sharp, the sign of elevation, indicating that the notes before which it is placed, must be raised half a tone. Ex. 24.

44 *Double* Sharp, raised two half tones. Ex. 25. (See *double Flat.*)

45 Signature, flats or sharps placed at the beginning of a tune or strain, to point out the key. Ex. 29. (See Key.)

46 Sixes, groups of six notes, in the time of four: they are triplets with divided notes. Ex. 39.

47 Sixteenth; Ex. 9. (See *Semiquaver.*)

48 Sixty-fourth; Ex. 11. (See *Half-demisemiquaver.*)

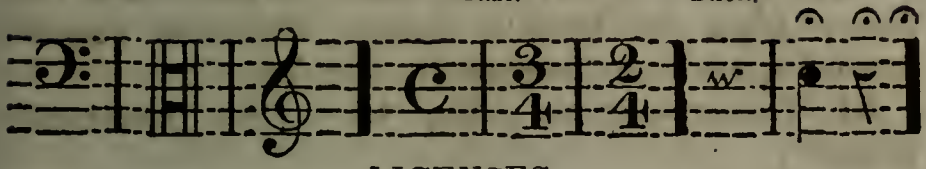
49 Slur, in vocal music, connects the notes to be sung to one syllable; in instrumental music, it directs the notes to be played *Legato.* Ex. 44. (See Legato.)

50 Spaces, the intervals between the note lines. Ex. 3.

51 Staccato, distinct. Ex. 45. (See Staccato.)

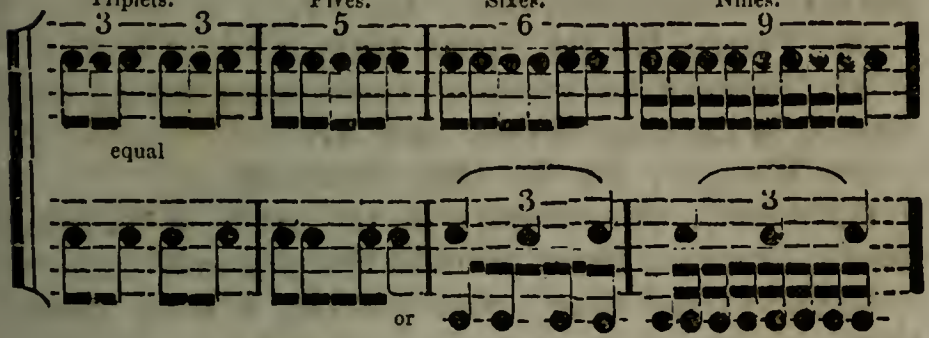
52 Staff, the name given to the five lines and four spaces, on which the notes are placed; which are numbered 1, 2, 3, 4, &c. from the lowest upwards, and called first line, first space, &c. Ex. 1. Each part has a separate staff. (See Clef.)

Ex. 33 Clefs. 34 Time. 35 Direct. 36 Pause.



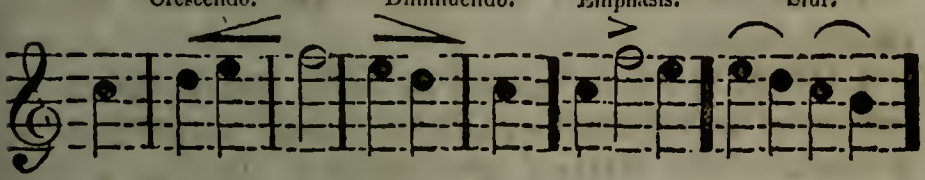
LICENSES.

Ex. 37 Triplets. 38 Fives. 39 Sixes. 40 Nines.

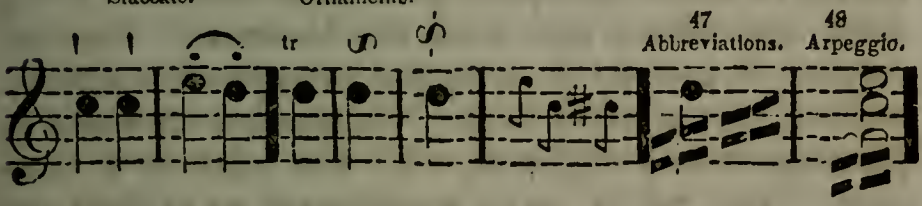


MARKS OF EXPRESSION.

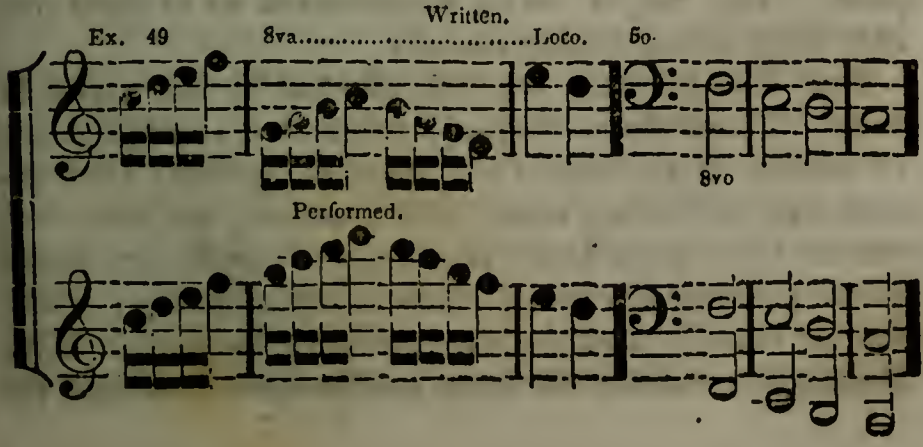
Ex. 41 Crescendo. 42 Diminuendo. 43 Emphasis. 44 Slur.



Ex, 45 Staccato. 46 Ornaments. 47 Abbreviations. 48 Arpeggio.



Ex. 49



53 Stem of a note, the small perpendicular line drawn from the head of a note; the stem may be turned upward or downward. Ex. 13.

54 Thirty-second; Ex. 10. (See *Demisemiquaver.*)

55 Ties, the cross lines which unite the stems of quavers, semiquavers, &c. Ex. 14.

56 Time; Ex. 34. (See Measures.)

57 Triplet, a group of three notes, to be performed in the time of two. Ex. 37.

58 Whole; Ex. 5. (See *Semibreve.*)

CHASSE, (Fr. chase,) in the style of hunting music, in which horns perform the principal part.

CHE, (Ital.) than; *poco piu che*, a little slower than.

CHEST VOICE. (See Voce de petto.)

CHIESA, (Ital.) church. *Musica da chiesa*, church music.

CHIMES, music played on bells, usually made by means of an apparatus called a chime barrel fixed to a clock. The barrels are similar to those of a hand organ, to which stumps or points are attached, which move the levers that raise the hammers. The apparatus is usually so arranged as to produce chimes periodically, at every hour. Chimes are often not so pleasing as they might be. By the hand of a composer, they might be so constructed as to treat our ears with an agreeable melody.

But few persons are not affected by the sound of bells. From their ringing, we derive an expression in music, of all others the most delightful; that increasing and dying away of the sounds, as they are wafted to or from us by the breeze. Bells are heard to the greatest advantage early in the morning; when the air is still, and the ear refreshed by sleep. The Hollanders exhibit the most enthusiastic fondness for

bells. Every church and public building is hung round with them in endless variety; and, as this music seems to be the national taste, they are never left at rest. They are kept striking and chiming every quarter of an hour through the day. But this is not enough; on their Stadt-house, a performer is stationed, to play a superior sort of bell music upon the *carillons*. This is done by a contrivance similar to the keys of a piano forte, which the player strikes with all his might, though a Herculean task, often with science and dexterity.

CHOIR, that part of a church where the singers are placed; the company of singers associated together for the performance of sacred music in a church.

The duties of the choir are so to perform their part of the devotional exercises of the sanctuary, as to excite, in the bosoms of the congregation, those emotions which are indicated by the sentiment of the words sung. The duty of the accompanist has been noticed. (See ACCOMPANIST.) The failings of the vocal performers, it is equally painful to speak of. Were a spectator, from the celestial world, to come into most of our congregations, he would regard the singing as any thing else than a devotional exercise. The causes of the desecration of this sacred service are various.

1. *The singers are too often persons of irreligious or light character*, and consequently cannot enter in the feelings of the sacred poet. Their irreverent behavior, during the other services, has been the cause of scandal in many churches. Whoever has frequented the pews of the choir, must have remarked their general indifference to the duties in which they are engaged. The singers busy themselves with the leaves of their music books, or hold conversation

in an under tone; while the instrumental performer may possibly be engaged in a pantomimic exercise upon his instrument, eagerly thrumming the voiceless keys. How can it be supposed that such individuals stand in the same relation to God, as the rest of the people? or, that they differ, in any essential point, from the noble instrument around which they congregate?

2. *Too great fondness for display.* This second cause follows from the first. If a choir cannot affect the feelings of the congregation, as they cannot do so long as their own are unaffected, they will of course wish to arrest attention by conceited flourishes; which they learn from the class next spoken of.

3. *The practice of hiring secular singers to perform the singing in a church.* It can never be expected of such characters, that they should at once exclude from their minds, the levity, and impurity of their daily occupation, and assume the devotion which is becoming in the house of God. The same fondness for vain and frivolous compositions, the same love for ostentatious decorations, the same desire of human applause, which are fostered by theatrical performances, go with them to the sanctuary; and the approbation bestowed by the world, induces a host of weak minded singers to become their imitators. (See 2 above.)

4. *Extreme jealousy of interference;* which renders the labors of a reformer a most severe and self-denying duty. The objection to reform is usually compounded of two ingredients, ignorance and self-conceit. It proceeds from an utter misconception of the real design and nature of the service. Singers frequently persuade themselves, that the psalmody is entirely their province; and reprobate any attempt to interfere, as an infringement on their rights. If

the clergyman, for instance, wearied out of all patience, by the mummery which has so long passed under the name of psalm singing in his church, presumes to remonstrate, mildly points out what he conceives the nature of the grievance, and proposes a remedy, his choir at first hear him with apparent attention; when alone, however, they put their heads together to measure their opinions and decide the case. Where obstinacy presides, and ignorance and wounded pride are the accusers of plain good sense, the result is easily seen. Many hard words are heaped on this interference, and it is soon settled that the 'parson' knows nothing of music. The results, such as leaving the seats, it is needless to particularize.

5. *The character and pretentions of the chorister.* The same remarks apply to him as above to the choir, only with more force. (See CHORISTER.)

6. *Bad taste in the choice of tunes and style of performance.* In almost every department of art and science, simplicity is the soul of excellence. (See ACCOMPANIST.) Now it often happens, that the whole character of a tune, in itself chaste and ecclesiastical, is destroyed by a tasteless performance. The ear is drawn to the performance, to the neglect of sentimental devotion. The same is the case when a tune is selected, incapable of expressing the desired sentiment. (See EXPRESSION.)

7. *The inattention of the congregation*, who, by their listlessness, appear to regard the time of singing as a season for relaxation; or an intermission, to give them an apportunity of attending to their little private concerns.

8. *The disregard and employment of the clergyman*, who is often turning over the leaves of his sermon, or looking out the next hymn, which ought to

be done at home, or looking for a chapter in the bible, or in adjusting the bible &c. about the pulpit. Can he blame the choir, for handling their books and instruments during prayers, while he sets such an example? Or, can christians censure them for not singing with devotional expression; while they themselves appear to regard the exercise, as any thing else, rather than devotional? We need a general reformation in the moral character of our choristers and choirs, and in our singing schools; and also in the conduct of ministers and congregations, before sacred music can become truly the handmaid of religion.

CHOIR MUSIC, plain music sung in chorus.

CHORAL, (from chorus,) plain, in notes of equal length.

CHORAL MUSIC, plain church music, consisting of a combination of different simple melodies, intended to be performed by many singers on each part, or by congregations. Choral music consists of equal and essential notes, and chiefly direct chords; in distinction from figurative music. (See *Figurative* HARMONY.)

CHORD, literally and anciently a distended sonorous string; but since the introduction of counterpoint, a combination of sounds struck at one time.

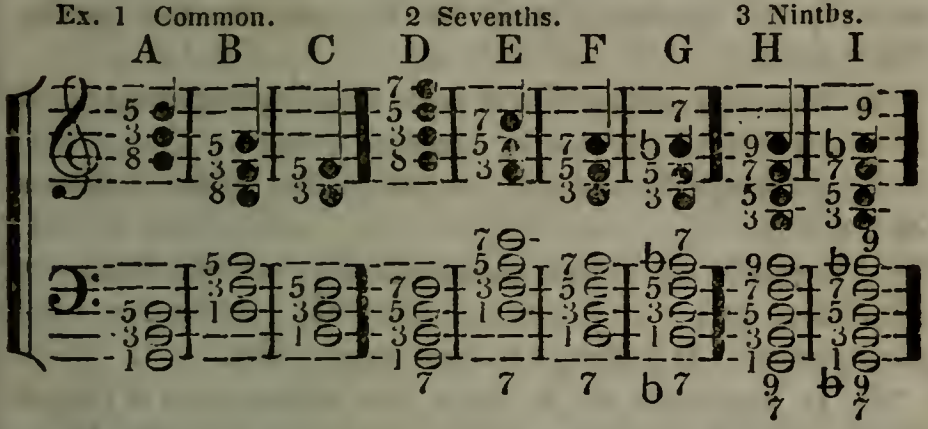
Chords are, for particular purposes, embraced in general classes. Every chord is either:

FUNDAMENTAL, DIRECT,	Class I; or	DERIVATIVE, INVERTED,	Class II.
NATURAL, ESSENTIAL,	Classes I & II; or	ARTIFICAL, ACCIDENTAL,	Class III.

COMPLETE, Classes I & II; or INCOMPLETE, Ex 27, 28, 29.
CLOSE, Classes I and II; or DISPERSED, Ex. 31, 32.
FULL, Ex. 24, 25, 26; or THIN, (which see.)

To designate particular chords, the nine natural chords through the volume, are marked by the first nine letters of the alphabet; and the small figures after the letters denote the particular inversions.

Class I. Fundamental and Direct chords.



The lower notes marked 1, are the fundamental; and for the sake of exhibiting more clearly the nature of inversions, the intervals which constitute the chords, are placed immediately above them; yet, in practice, the most of them are taken on the treble staff, as is exhibited by the crotchets. (See figured Base, Ex. 2, Remark.)

It will be perceived, that all the fundamental chords consist of a series of thirds placed one above the other. The character of each chord depends on the position, nature, and number of thirds of which it is composed. The following table exhibits the thirds, in all these particulars. (See theory of Chords.)

COMPOSITION OF CHORDS.

	A	B	C	D	E	F	G	H	I
Ninth	-	-	-	-	-	-	-	III	3
Seventh	-	-	-	3	3	III	3	3	3
Fifth	3	III	3	3	III	3	3	3	3
Third	III	3	3	III	3	3	3	III	III
Fundamental	F.	F.	F.	F.	F.	F.	F.	F.	F.

III stands for major third, and 3 for minor third.

In every fundamental chord, there is one *essential* interval, which gives name to the chord. In the common chords A and B, it is the third next the base; in all the others, it is the extreme interval from the base; viz. in the chord C, the fifth; in D, E, F and G, the seventh; and in H, and I, the ninth. The chord,

A has the major third next the fundamental, and is hence called the *major common chord.*

B, for a similar reason, is called the *minor common chord.*

C is made up of two minor thirds, which make an imperfect fifth; it is hence called the *imperfect common chord.* It belongs to the minor key.

D is the same as A, with the addition of a minor third, which makes a minor seventh with the base. It is called the *dominant seventh,* because its fundamental is the dominant or fifth of the key, and regularly *leads* to the tonic chord as its successor.

E is the same as B, with a minor third added, which makes a seventh with the fundamental. It is usually found on the supertonic, and regularly leads to the dominant.

F is the same as C, with a major third added. It is, in the minor key, the same as E in the major, leading to the dominant.

G is the same as F, except that the last added third is minor, or flat, making a diminished seventh.

H is the same as D, with the addition of a major third, which makes an interval of a major ninth.

I is the same as H, except that the last added third is minor, making a minor ninth.

In the two last, the fundamental is usually omitted, to avoid harshness.

These chords all belong to three distinct classes.

The *first class* includes the *major* common chord,

A, and all those made from it by the addition of one or more thirds; viz. D, H, and I.

The *second class*, embraces the *minor* common chord, B, and E which is made from it.

The *third class*, includes the imperfect common chord, C, and those made from it, viz. F and G.

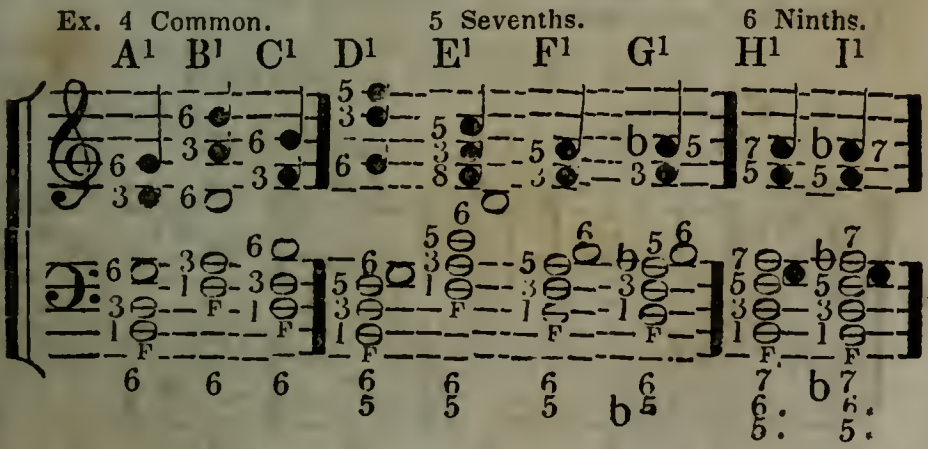
The chords of the same class may be used interchangeably, and also their inversions. (See FIGURED BASE.)

The common chords are consonant; the others are all dissonant. Of the latter, D is the most common, and one of the most important in music. (See DISCORDS.)

CLASS II. DERIVATIVE OR INVERTED CHORDS.

REMARK. The lowest notes of direct chords, are called the fundamental base; and the lowest notes of all chords taken indiscriminately, are called the figured base, or simply the base. The F's in the following examples, represent the fundamental base, and the notes figured 1, the real base.

FIRST DERIVATION OR INVERSION.

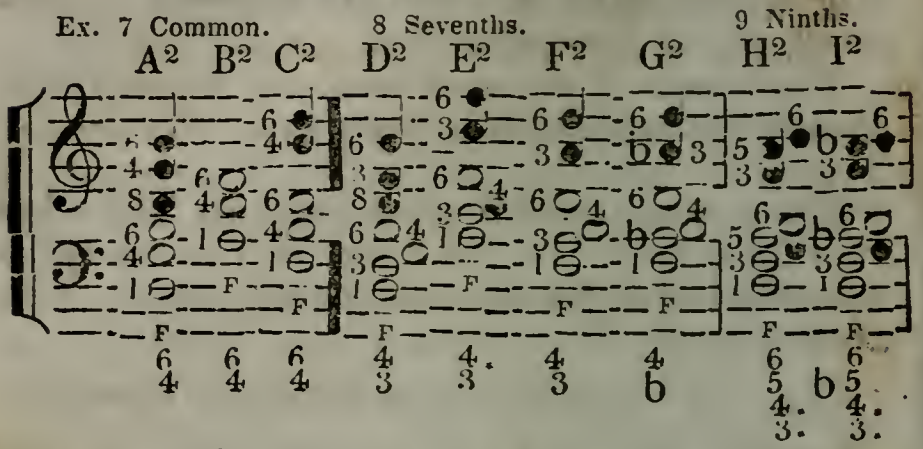


In practice, the black notes on the base staff are usually omitted; and also in consequence the figures marked *.

In the *first derivative*, the fundamental notes are taken away and placed an octave above. They thus become sixths to the new base notes, which were the

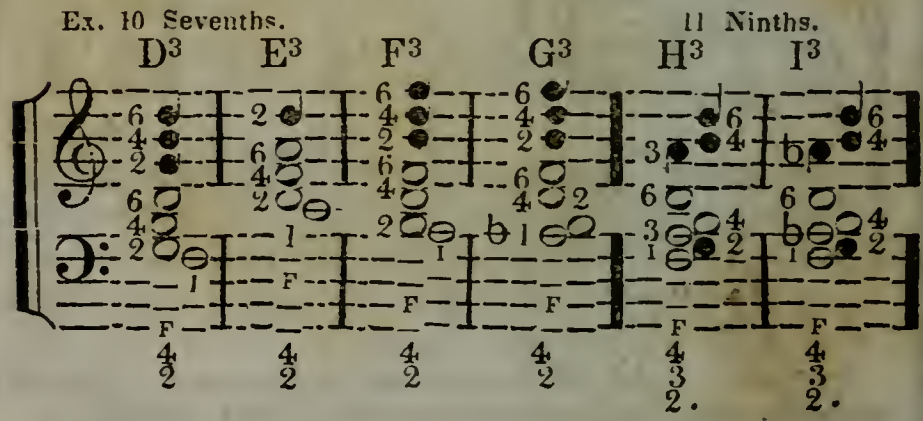
original thirds. Consequently the fundamental base, represented by the F's is a third below the real base. Ex. 4, 5, 6.

SECOND DERIVATION OR INVERSION.



In the *second derivative*, the two lowest notes of the fundamental chords are taken away, and placed each an octave above; and thus the original fifth becomes the base. The fundamental base is then a fifth below, and its transferred notes become fourths above the new base. Ex. 7, 8, 9.

THIRD DERIVATION OR INVERSION.

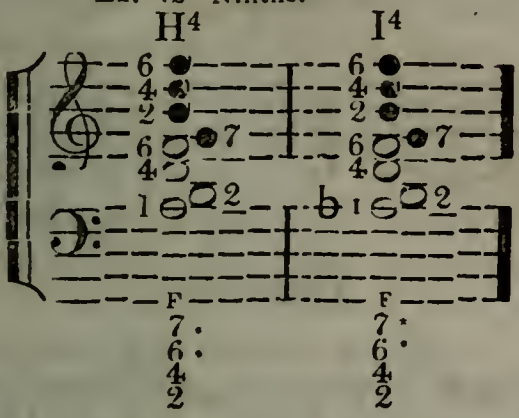


In the *third derivative*, the three lowest notes of the chords of the seventh and the ninth, are, in the same manner, transferred; and the original seventh

becomes the base. The fundamental base is then a seventh below, and its transferred notes become seconds above. Ex. 10, 11.

FOURTH DERIVATIVE OR INVERSION.

Ex. 12 Ninths.

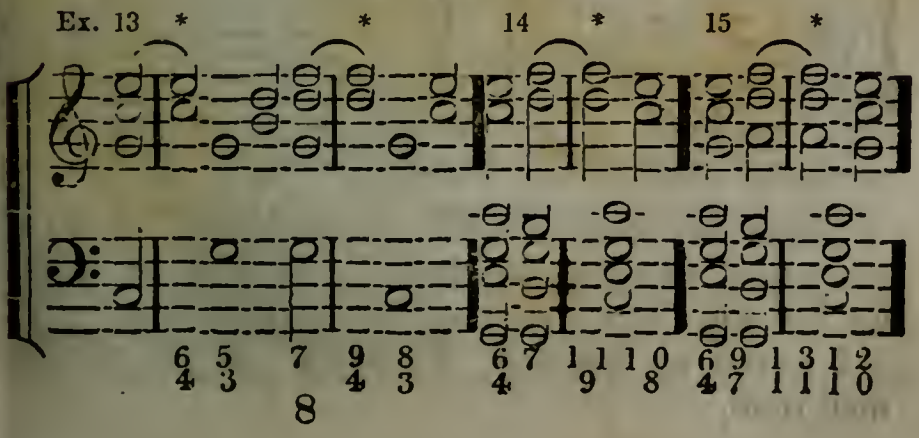
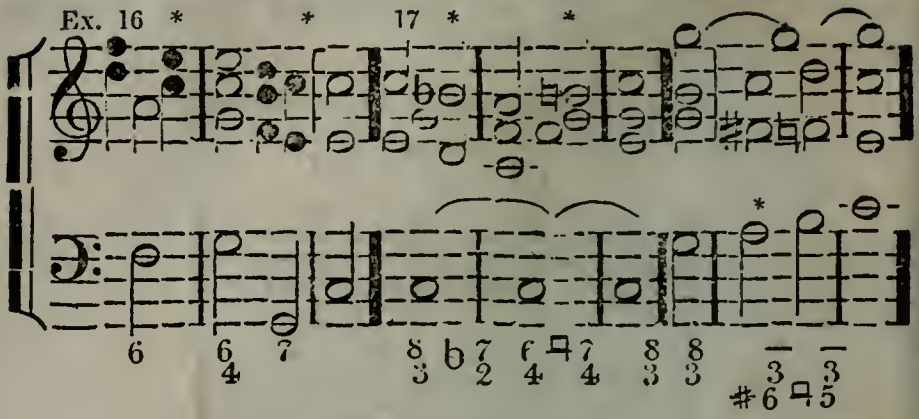
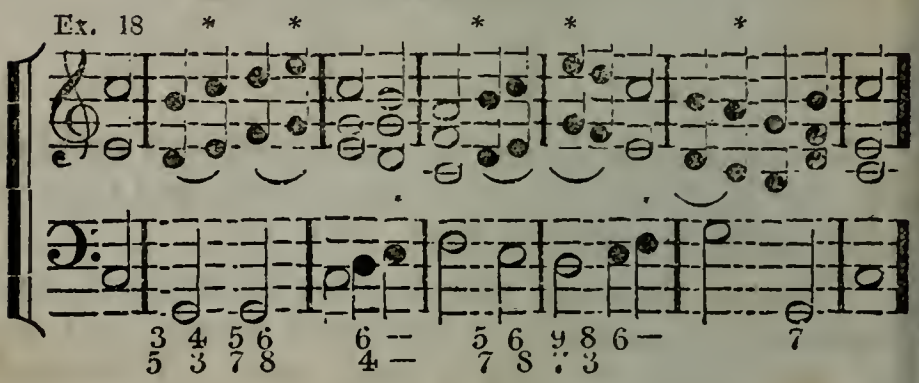


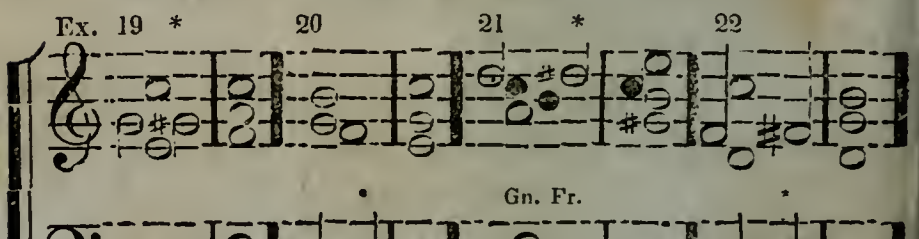
In the *fourth derivative*, the four lowest notes of the chords of the ninth, are transferred, and the original ninth becomes the base. Ex. 12.

The two classes of chords above enumerated, embrace all the natural and essential chords, and are all that belong to plain church music. The third class belongs exclusively to figurative harmony; and is here merely exhibited.

CLASS III. ARTIFICIAL OR ACCIDENTAL CHORDS.

The * designates the artificial chords.

SUSPENSIONS.

ANTICIPATIONS. PEDAL CHORDS.

TRANSITIONS.

ALTERATIONS.



These particular chords are explained, in the alphabetical enumeration below; previous to which, we will say a few words on the subject of the

NAMING OF CHORDS. Particular chords are named from,

[1] The *principal intervals* above the base which are indicated by the figures. (See FIGURED BASE II.) Thus, A^2 is called the chord of the fourth and sixth, or simply six-four; naming the figures which indicate the chord. In the same manner, all the chords of the classes I and II are named; also such suspended chords as are figured. If the *principal* interval is a third, it is called a *common* chord.

[2] The *fundamental note.* If the fundamental note is the dominant, the chord is called the dominant common chord, dominant seventh, dominant ninth, &c.; if it is on the tonic or principal note, it is called the principal or tonic chord.

[3] The *manner* in which the chord is *formed.* Thus, the chords of the third class are called chords by suspension, &c; those of the second class inverted chords.

[4] The *number of notes* in the chord. Thus, a chord of two notes is a double chord; of three notes a triple chord or triad; of many notes, a full chord.

ALPHABETICAL ARRANGEMENT OF CHORDS.

The figures enclosed by [ ] refer to the different methods of naming spoken of above.

1 ACCIDENTAL CHORDS, [3] consist of accidental notes, and characterize figurative, in distinction from plain choral harmony. Ex. 13 to 22. (See *Figurative* HARMONY.)

2 CHORDS BY ALTERATION, [3] are transient chords, in which one or more of the intervals is altered, that is, raised or lowered a chromatic semitone, in order to lead the ear more surely to the next tone. Ex. 19 to 22, Class III.

3 ANOMALOUS CHORDS, are such as contain extreme flat or extreme sharp intervals. (See 2.)

4 CHORDS BY ANTICIPATION, [3] arise when some

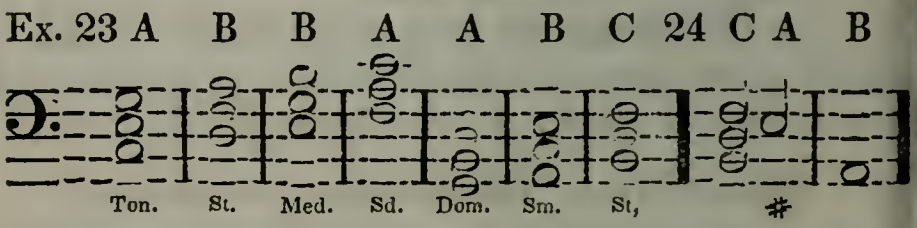
intervals of a chord pass into those of the succeeding chord. Ex. 16. (See PORTAMENTO DI VOCE.)

5 ARTIFICIAL CHORDS. [3] (See 1.) In seeking the fundamental base, these chords are not regarded.

6 CLOSE CHORDS, [3] are those in which the intervals above the base succeed each other according to their numerical value; the smallest interval first, and so on. Example 1 to 12, and 23, are all close chords.

7 COMMON CHORDS, [1] are all those which embrace none but common or consonant intervals. A common chord consists of a fundamental note, its third and its fifth, and usually its octave; Ex. 1, Class I. Every note of the scale may have a common chord, major, minor, or imperfect. Ex. 23.

Common Chords.



C is not a common chord, except on the second of the minor key, and followed by the dominant chord. Ex. 24. In all other cases, it is a dominant seventh with the fundamental note omitted.

By annexing a third above each of these chords, they become chords of the seventh, Ex. 36; and another third still, makes them chords of the ninth.

8 COMPLETE CHORDS, [4] a chord is complete, when it contains all the notes belonging to that chord. Examples 1 to 12 are all complete chords.

9 DERIVATIVE CHORDS, [3] a chord is derived, whose base is not the fundamental note. There are as

many derivations, as notes above the fundamental. Ex. 4 to 12, Class II.

10 Direct chords, [3] have the fundamental note the lowest. Ex. 1, 2, 3, 23, and 36.

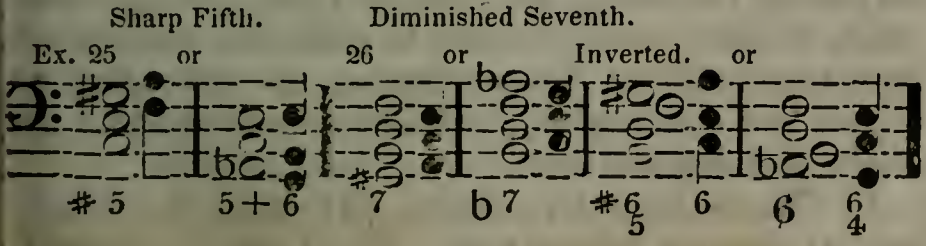
11 Dispersed chords, [3] are those in which the intervals do not succeed each other in numerical order, but are scattered, as in vocal music of several parts. Ex. 33, 34.

12 Dominant chords, [2] have the dominant for the fundamental note. Ex. 20, and 23, Dom, and 36, D. (See *Seventh.*) These are called dominant or *ruling* chords, because they lead to the tonic or key note. (See Cadence.)

13 Double chords, [4] consist of two notes.

14 Chords of the Eleventh, [1] are composed of five thirds placed one above the other, that is, chords of the ninth with an additional third, which makes an eleventh. They are suspended chords, used in full harmony. Ex. 14.

15 Equivocal chords, [3] are those which divide the octave into equal intervals; as, the chord of the extreme sharp fifth, Ex. 19, and 25, which divides the octave into three major thirds; and the diminished seventh, Ex. 26, which divides it into four minor thirds. They are called equivocal, because they may be produced either by flats or sharps; and hence leave the ear in doubt which way they may lead.

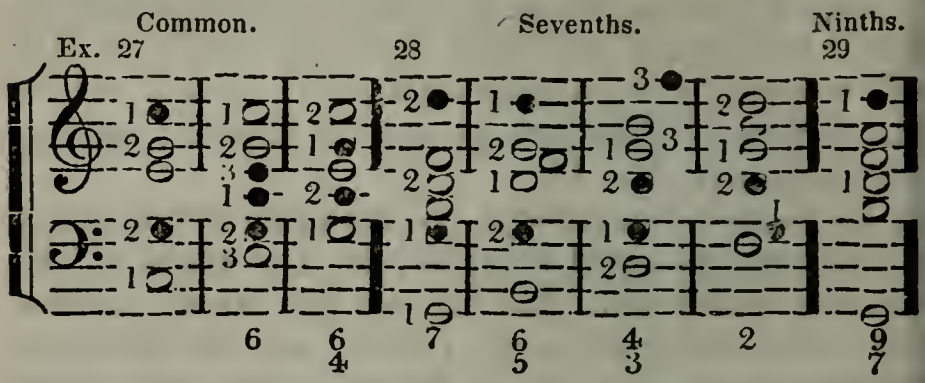


In either example, the several chords are practically the same; yet they lead to different chords, as we

see by the crotchets. They both may lead to a great variety of chords; but the diminished seventh only is much used. (See *diminished Seventh.*)

16 Chords of the Fifth; [1] the imperfect fifth, Ex. 1, C; and the sharp fifth, Ex. 25. The perfect common chords are sometimes marked 5.

17 Full chords, [4] are those which contain more notes than are essential to the chord; that is, those in which some of the intervals are doubled. In the following examples, those notes which may be so taken, are numbered in the order in which they are successively doubled. The doubled intervals are black notes, and numbered to correspond with the single.



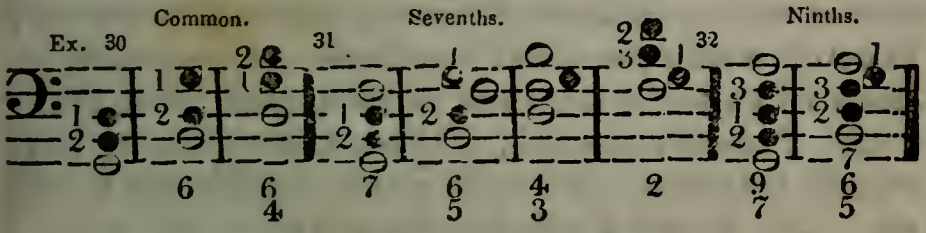
In the chords of the ninth and inversions, the original fifth is the only note which can be doubled. Any note which can be doubled, may also be omitted, while the others are doubled; and on the other hand, a note which cannot be doubled, can seldom be omitted. In a full orchestra, the notes may be tripled and quadrupled, as well as doubled, both upwards and downwards.

18 Fundamental chords, [2] have the fundamental for the lowest note. Ex. 1, 2, 3, Class I. The term is sometimes used as synonymous with natural chord.

19 Harmonious chords, [3] are such as can be performed in succession, without giving offence to a musical ear. (See *related Chords.*)

20 Imperfect chords, [3] are those which, though not dissonant, are not entirely satisfactory to the ear. Ex. 1, C.

21 Incomplete chords, [4] do not contain all the intervals belonging to them, in distinction from complete or full. In the following examples, the notes which may be omitted, are black, and numbered in the order in which they may either one or all be successively left out.



The inversions of the ninth are seldom used; the fundamental note is omitted, and they then become chords of the seventh, and omissions are made accordingly. In common four voice singing, the chords of the seventh and ninth are usually incomplete.

22 Chords by Inversion; [3] when the fundamental note of a chord is transposed into the upper parts, or the lowest or base note is not the fundamental, the chord is said to be *inverted.* The inversions are named from the lowest or base note. If it is the first note above the fundamental, it is called the first inversion; if the second above, the second inversion, and so on. Ex. 4 to 12, Class II.

23 Major chords, [1] are direct chords, whose essential interval is major. Ex. 1, A, and 36 Ton. and Sd., and 3, H.

24 Mediant chord, [2] has the mediant or third for its fundamental note. Ex. 23, Med., and 36, Med.

25 Minor chords, [1] are direct chords whose essential interval is minor. Ex. 1, B, and 2, D and E, and 3, I.

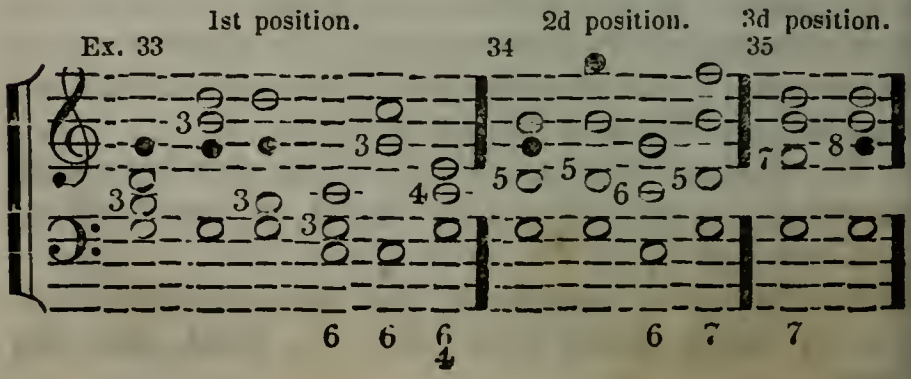
26 Natural chords, contain none but essential notes. Ex. 1 to 12, Classes I, and II, and Ex. 27 to 32.

27 Chords of the Ninth, [1] are discords, in which the ninth is taken for the eighth, and descends to that note in the next chord. Major ninth, Ex. H, Classes I and II, and minor ninth, Ex. I, same classes. The chords of the ninth, unless suspended, are generally used without the fundamental note.

28 Pedal chords; [3] when a tonic or dominant note is continued through several successive chords, those of which the pedal note does not constitute an essential part, are transient pedal chords. Ex. 17.

29 Perfect chords, [3] are made only by consonant intervals, and such as are satisfactory to the ear. Ex. A and B, Classes I and II.

30 Position of chords, the order in which the several notes stand with regard to each other, while the base note remains the same. The upper notes only are inverted, consequently the names of the chords are not altered. The positions are named first, second, and third, according as the first note above the base, is the first, second, or third interval, in numerical value.



The octaves may be used or not, and they are hence put in black notes.

31 Principal chords, [3] the tonic common chords, so called because they comprise the principal notes of the key; viz. the mediant, dominant, and the octave. Ex. 23, Ton.

32 Quadruple chords, [4] consist of four notes. Common chords are usually quadruple.

33 Relative chords, are the common chords of the relative keys; and, next to the principal chord, are most satisfactory to the ear. The relative major chords are the *dominant*, Ex. 23, Dom., and the *subdominant*, Ex. 23, Sd.; and the relative minor is the *submediant*, Ex. 23, Sm. These chords most naturally follow the tonic; or their own dominant chords, with the notes of modulation, which lead to each relative key. In the latter case, the ear is satisfied as with a tonic chord. (See Modulation.)

34 Chords of the Seventh; [1] there are six chords of the seventh, viz. the dominant seventh, seventh with a minor third, sharp seventh with the imperfect fifth, seventh of the leading note, and diminished seventh.

1 *The dominant seventh*, is the *major* common chord, with a minor seventh added. Ex. D, and 36 D. This chord is the most important in modern music; and is the most harmonious of all discords. It decides, in an indubitable manner, the key to which it belongs.

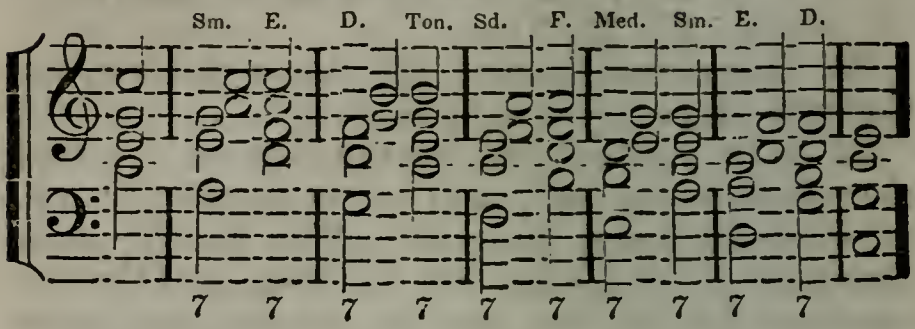
2 *The minor triad, with the minor seventh added*, commonly has for its fundamental note, the supertonic or second of the key. Ex. 2, E, and 36, E. It is sometimes found on the submediant. Ex. 36, Sm.

3 *The sharp* or *major seventh*, is the common chord with a major seventh. It is used on the tonic and subdominant of the major scale. Ex. 36, Ton. and Sd.

4 *The imperfect triad, with the seventh added*, Ex. 2, F, and 36, F.

These four sevenths often succeed each other in a sequence of sevenths. Ex. 36.

Ex. 36 Chain of Sevenths.



5 *The seventh of the leading note*, is the dominant ninth, with the fundamental note omitted. Ex. H, Classes I and II, with the black note omitted. It leads to the tonic chord.

6 *The diminished seventh*, is the chord of the minor ninth with the fundamental note omitted. Ex. I, Classes I and II, with the black notes omitted. This is the more common form of the chord of the ninth. The diminished seventh is the most remarkable chord in harmony, being an equivocal chord, dividing the octave into four minor thirds. (See *equivocal Chords* Ex. 26, and MODULATION.)

All except the natural sevenths, Ex. 2, can be sevenths only by suspension; as, Sm., Ton., Sd., and Md., Ex. 36. The natural sevenths may be prepared as in example 36, or not.

35 CHORDS OF THE SIXTH, [1] have nothing worthy of distinct mention in this place. Those which have some peculiar designation are the,

1 *Added Sixth*, a name given by Rameau to the supertonic seventh; whose fundamental he supposed to be the subdominant with the sixth added. Ex. E, Classes I and II.

2 *French Sixth*, or *extreme sharp sixth*, with the fourth and third. Ex. 21, with the right hand dot.

3 *German Sixth*, the same as the French sixth, with the fifth instead of the fourth. Ex. 21, with the left hand dot.

The French sixth is the same as F^2, Ex. 8, and the German the same as F^1, Ex. 5, with the sixth sharped.

4 *Italian Sixth*, same as the preceding, with both the fourth and fifth omitted. Ex. 21.

36 Subdominant chords, [2] are relative major chords on the fourth of the key, Ex. 23, Sd., or chords of the seventh, Ex. 36, Sd.

37 Submediant chords, [2] are the relative minor chords, Ex. 23, Sm., or chords of the seventh, Ex. 36, Sm., on the sixth of the key.

38 Supertonic chords, [2] are common chords, Ex. 23, St., or chords of the seventh, Ex. 2, E, on the second of the key.

39 Chords by Suspension, [3] are formed, when one or more notes of a chord are prolonged into the succeeding chord, so as to connect the two more closely. Suspended chords are artificial and discordant, and regularly are resolved on the natural chord which they retard. Ex. 13, 14, 15, Class III. (See *Figurative* Harmony.)

40 Thin chords, [3] are incomplete chords, Ex. 30, 31, 32; but the term is commonly used in a bad sense, to denote that the chord is not only incomplete but defective, by the omission of essential notes.

41 Chords of the Thirteenth, [1] are composed of six thirds placed one above the other; or chords of the eleventh, with an additional third. When full, they contain every note of the scale; but the upper notes are mere suspensions. Ex. 15.

42 Tonic chords, [2] principal chords, Ex. 23,

Ton., or prepared chords of the seventh. Ex. 36, Ton.

43 Chords by Transition, [3] are those which contain transient notes, that are not taken into account in the harmony. There are three classes of transitions, exhibited in Class III.

1 *Regular*, on the unaccented part of the measure. Ex. 18, at the first and last stars *.

2 *Irregular*, or *appogiatures*, on the accented part of the measure. Ex. 18, two middle stars *.

3 *Chromatic*, Ex. 19 to 22. (See *Chords by Alteration.*)

44 Triads, [4] a concise term to express the common chords, because they consist of three essential notes. The intervals which are doubled are reckoned as one with the simple intervals. Triads are major, minor, and imperfect, the same as common chords.

45 Triple chords, consists of three notes.

Theory of CHORDS. If we take two distended musical strings, which at full length produce the same sound; and divide one of them, by a moveable bridge, into any two parts, whose relative lengths to each other, shall be expressed in whole numbers not larger than 10, we shall get all the intervals used in natural chords. Thus, if we divide one string in the middle, the two ends will be equal; and each end will sound an octave to the other string. If one end is twice as long as the other, or the string divided into three equal parts, of which two are at one end and one at the other; the sound given by the long end, which is two thirds of the string, will be a fifth above the other string; and the short end, an octave and a fifth, or twelfth. We can in the same manner get all the natural intervals; as in the following,

TABLE OF INTERVALS USED IN NATURAL HARMONY.

Parts.	Long end.	Ratio.	Interval.	Short end.	Ratio.	Interval.
2	1	2:1	8	1	2:1	8
3	2	3:2	V	1	3:1	Octave V
4	3	4:3	4	1	4:1	Double octave
8	5	8:5	6	3	8:3	Octave 4
5	4	5:4	III	1	5:1	Doub. oct. III
5	3	5:3	VI	2	5:2	Octave III
6	5	6:5	3	1	6:1	Double oct. V
7	5	7:5	IV or 5*	2	7:2	Octave 7*
7	4	7:4	7*	3	7:3	Octave 3*
9	5	9:5	7*	4	9:4	IX.
17	10	17:10	b7*	7	17:7	not used.
17	9	17:9	not used.	8	17:8	9*

* Not exact, but near approximation.
The Arabic figures denote the minor intervals, and the Roman numerals the major.

Those having greater prime numbers than 5, are discords. The ratios express the relation of the whole string to the several parts. The simpler ratios belong to the more perfect chords; and the figure 1 represents unison.

NATURAL CHORDS WITH THEIR RATIOS.

A,	B,	C,	D,	E,	F,	G,	H,	I,
-	-	-	-	-	-	-	IX 9:4	9 17:8
-	-	-	7 7:4	7 7:4	7 7:4	b7 17:10	7 7:4	7 7:4
V 3:2	V 3:2	5 7:5	V 3:2	V 3:2	5 7:5	5 7:5	V 3:2	V 3:2
III 5:4	3 6:5	3 6:5	III 5:4	3 6:5	3 6:5	3 6:5	III 5:4	III 5:4
F. 1	F. 1	F. 1	F. 1	F. 1	F. 1	F. 1	F. 1	F. 1

(See INTERVALS; CHORDS, *class first;* and HARMONY.)

CHORISTER, } a performer in a choir. In this
CHORIST, } country, the chorister is the leader of the choir. The office of a chorister is a responsible and sacred one. Next to that of the

clergyman, perhaps none is more so. Something more than a mere singer is required; though from common practice we might infer otherwise. It is a lamentable fact, that a conscientious man seldom pays that attention to science, taste, and practice, which is necessary to qualify him for a chorister. He witnesses the instability and levity of choristers generally, and at once concludes that it is all to be attributed to the effect of music: as though the improvement of one of the noblest talents our Creator has given us, tended to dissipate the mind. It is a serious mistake, and one which must be corrected. It is not the cultivation of music, which makes choristers proverbial for their instability and vanity; it is the criminal neglect of other talents. The cultivation of any one talent to the exclusion of others, let that talent be what it may, produces a species of insanity. Another reason why the office of chorister is not desired by men of character, is the little respect usually attached to it. This is the very reason why such men should make it a point of duty to qualify themselves, and enter the office, so as to make it respectable. The office is essentially the most respectable in the congregation, and if it is not made so, the fault lies with those who are capable of making it so. In selecting choristers, we presume none will be found, who will defend the practice of admitting characters openly immoral into the sacred office. Yet, from among those who are not chargeable with undisguised violations of common morality and decency, a choice is made of those who too often manifest a lamentable ignorance of the real nature of those services which are rendered unto God. The task is often undertaken as a means of livelihood, or winning human applause. But no thought appears to enter the mind, of the peculiar aim of the duty, the

influence it is designed to have over the feelings and character of the people. Hence tunes are selected which are capable of being performed with the greatest display, rather than those of a more simple character, which naturally express devotional feelings. (See PSALMODY, and EXPRESSION.)

CHORUS, (Lat. a band of singers and dancers,) a composition of four or more parts, to be performed by all the voices accompanied by the instruments. A common psalm tune performed by a large congregation, forms a splendid chorus.

CHORUS SINGER, one who sings in chorus, whether treble, tenor, or base, in distinction from *solo* singer.

CHROMATIC, (Gr. *chroma*, color or shade,) proceeding by semitones produced by accidentals, ascending by sharps and descending by flats. (See SCALE and COLORS.)

CHROMATIC SEMITONE, the interval between a note and the same letter flatted or sharped.

CHROMATIC SIGN, a flat, sharp, or natural, which divides a tone into two semitones.

CHRONOMETER, (Gr. *chronos*, time, and *metron*, measure,) an instrument for measuring time. (See METRONOME.)

CHURCH MODES. (See MODES.)

CHURCH MUSIC, plain music for the sanctuary, nearly the same as choral music. In church music, few ornaments and accidental notes are admitted, and few divisions used ; the notes to some extent are of unequal length, yet seldom more than one to a syllable. (See CHANT II, MASS, & PSALMODY.)

CIACONNE. (See CHACONNE.)

CITHARA, the lyre of the ancients. At first, it had only three strings, but the number was at different times increased to eight, nine, and lastly to twenty-four.

CLANGOR, a loud shrill sound peculiar to the trumpet.

CLAPPER, the tongue of a bell.

CLARICHORD, a keyed instrument, now out of use, of the spinet kind, with the strings supported on five bridges. The strings were covered with cloth, which rendered the sounds sweeter, and, at the same time, so deadened them, as to prevent their being heard at a considerable distance. On this account, it was much used by the nuns. It is sometimes called the dumb spinet.

CLARINET, } a loud wind instrument of the
CLARINETTO, } reed kind, consisting of a straight tube, blown at the end, and having a bell shaped outlet for the wind. As an accompaniment for the voice, it is inferior to the hautboy or flute; but, in a military band, it is the leading instrument, and the chief support. The clarinet without keys for the semitones, is a defective instrument, on any but its natural key and the key nearest to it, that is, with but one accidental. Hence, in order to play in different keys, different kinds of clarinets are used. The common clarinet is pitched on C, and F is the only other eligible key, which can be heard to advantage; and pieces of music for it, are usually written on those keys. Its lowest note is E below the base clef; and in the hands of a skilful player, it may ascend three octaves, to E in alt, and even higher. To play the B flat and E flat keys, a B flat clarinet is used, and the notes are all transposed and played a tone higher than written; that is, if they are written in the key of B flat, they are played in the key of C, or in its natural key. An A clarinet is also sometimes used for sharp keys; on which the notes are played a minor third higher than written; that is, if written in A, they are played in C, or in its natural key.

The notes of a clarinet below B flat on the treble staff are remarkably soft, and are therefore called the notes of the *chalameau;* from B flat to the second line above the treble staff, which is the highest note employed in concert, the notes are brilliant and sonorous.

The clarinet is of German origin, and was introduced into England about 1770. For the first twenty years, its use was confined to the military. From its warlike tone, it was soon adopted by all the military bands in Europe. The regiments of the French, under Bonaparte, were headed by vast groups of clarinet performers. At a review of 18,000 of his troops at Paris, in 1802, there were twenty bands of fifty each. The incessant use of wind instruments, during the late European wars, tended much to their improvement. In skilful hands, under the management of Haydn and Mozart who introduced them into the orchestra, the lustre of their tones added much to the effect of the performance. Their lower tones possess singular beauty in dignified music. The tones of the clarinet are peculiarly grateful in the open air. To its softened echoes, in a still night, we listen with rich delight. (For its scale and directions for playing it, see WIND INSTRUMENTS.)

CLARINO, (Ital. a trumpet,) a kind of trumpet, consisting of a tube narrower than the common trumpet, and the tone of which is exceedingly shrill.

CLARION, an octave trumpet, with a shrill and clear tone.

CLAVICHORD, an instrument partaking both of the organ and piano forte. (See CLARICHORD.)

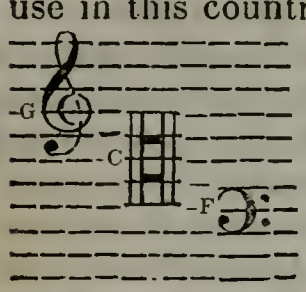
CLAVICIMBALUM, (Lat.) an ancient musical instrument, like the harpsichord, with thirty strings placed perpendicularly.

CLAVIER, the assemblage of all the keys of an

organ or piano forte; which represent all the sounds used in melody and harmony. In organs, claviers vary according to their size. While some organs have but one, others have five, besides two for the feet.

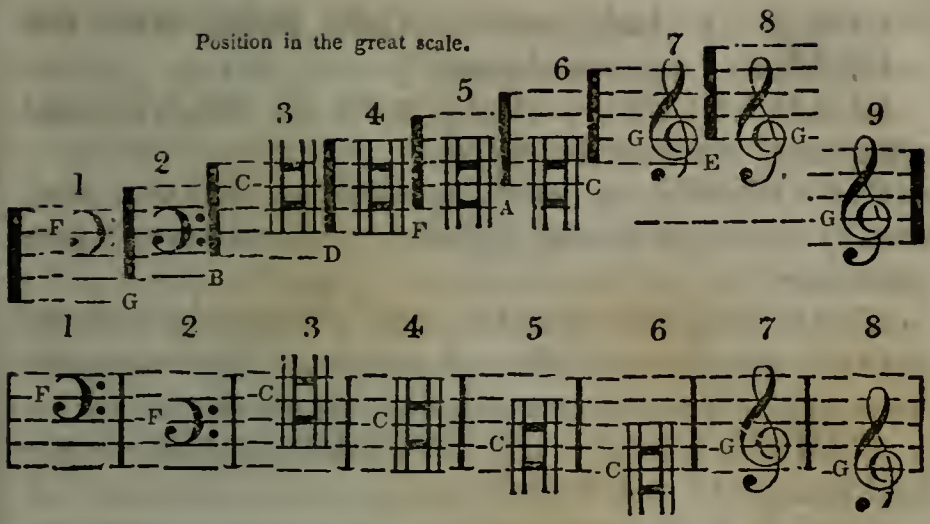
CLEAR, an epithet applied to musical compositions in opposition to overloaded harmony. A *tone* is clear, when it is free from any foreign sound.

CLEF, (Lat. *clavis*, a key,) a musical character placed at the beginning of each staff, to determine the names of the notes, and their pitch or places in the great scale of music. The three clefs now in use in this country are,



I. The TREBLE or G clef placed on the second line,
II. The TENOR or C clef, placed on the third or fourth line,
III. The BASE or F clef, placed on the fourth line.

These three clefs are at the interval of a fifth from each other. The distance from the bottom line of a staff to the top, forms the compass of the natural tones of an ordinary voice, reckoning only the chest tones. By the several situations given the clefs on the staff, they operate as so many more different clefs, and furnish us with the means of expressing all the notes, within the usual compass of execution, without a confused addition of added lines. If the extent of an instrumental part is very great, so as to require an inconvenient number of added lines, a different clef may be used in the same staff. By the different positions of these three clefs on the staff, eight different scales, adapted to eight different species of voice or instruments, and placed at the distance of a third above each other, have, at different times been used. Ex.



1 The common *base* clef on the fourth line.

2 The *baritono* clef, on the third line. (*used in old music.*)

3 The *tenor* clef, on the fourth line.

4 The *alto* clef, on the third line.

5 The *mezzo soprano*, or second treble clef, on the second line.

6 The *soprano* or first treble clef, on the first line.

These four C clefs are much used in vocal music on the continent of Europe; but in this country, the G clef takes the place of them all.

7 The *treble* clef, used for the first and second trebles and for shrill instruments, such as the violin, flute, and clarinet.

8 The *high treble* clef, on the first line. (*used in old French music.*)

9 The *treble* clef placed an octave below, for the use of the *tenor* and *alto.*

CLOSE. (See CADENCE, and CHARACTERS.)

CLOSE CHORDS. (See CHORDS.)

CODA, (Ital. the end,) an extra passage at the end of a composition, which forms a final close, after the other strains have been duly repeated; it is usually animated. The coda is used also for the ending of canons.

COL, } (Ital.) with. *Colla parte*, with the
COLLA, } principal part.

COLORATURA, (Ital.) with all the trills and ornaments that can be made.

COLORING, a term applied to bravura airs, usually arranged to one syllable, with chromatic progressions.

COLORS, the Greeks used differently colored notes to express the different genera. We retain the term in the word *chromatic*, (which see.)

COMBINATION OF SOUNDS, a union of several sounds in one chord.

COME, (Ital.) as.

COME SOPRA, (Ital.) as above; referring to some previous direction.

COME STA, (Ital.) as it stands; to be performed as written, without embellishments.

COMIC, a term applied to a lively air with humorous words.

COMMA. (See INTERVAL.)

COMMON CHORD, the combination of the third, fifth, and eighth, with any base note. (See CHORD and TRIAD.)

COMMON TIME, even time, two or four parts in a measure. (See MEASURE.)

COMODO, (Ital.) convenient, not so quick as to be difficult.

CON COMODO, with an easy quickness.

COMPANY OF MUSICIANS, an association of musical performers and composers.

COMPASS, the whole range or extent of sounds, comprehended by any voice or instrument.

COMPLEMENT, the interval wanted to fill up the octave; thus, the fourth is the complement of the fifth; the sixth of the third, &c.

To COMPOSE, to invent new music.

COMPOSER, one who composes new music, according to the rules of composition; a practical musical author.

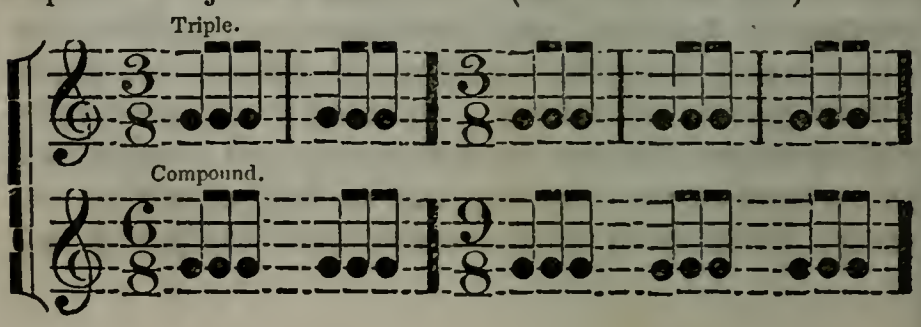
COMPOSITION, the art of inventing, and writing melodies or airs, and of accompanying them with suitable harmony; in a word, of constructing a complete piece of music, in all its parts, according to the rules of the art. The fundamental rules of counterpoint are always the same; but they are the less observed as the parts become more numerous and difficult. The knowledge of harmony and its rules, is the foundation of composition. Skill in completing the chords, preparing and resolving discords, finding fundamental bases, and directing their progression, are necessary; but these are only instruments, by which genius and good taste are to operate.

The nature of musical composition is undergoing a continual change, (see HISTORY OF MUSIC,) and so innumerable are the combinations which may be wrought, that its style is without limits, and its effects unbounded. Our ancestors imagined that they could unravel the musical mysteries, by making sounds follow each other agreeably to certain laws; thereby uniting the principles of harmony and melody at once. Every device was tried; such as placing what was uppermost in the piece occasionally at the bottom, called inversion; which, with contrary motion, imitation, augmentation, answers, and the like, was thought to achieve all the varieties attainable in the system of sounds. But 'the moulds of the contrapuntist are broken,' and musicians are taught this great truth, that the art knows no bounds but those which nature prescribes. Modern composers have cultivated an alliance between sense and sound, and given pathos and feeling to the language which is sung; while their predecessors were too much en-

veloped in the mazy windings of harmony, to attend to expression. Haydn must have the honor of completing the revolution, and of giving character to the modern style of music, by combining passionate expression and rhythmical phrases, with harmony and melody. Mozart differs from Haydn in giving more pathos and simplicity to his melodies; though, in his compositions, he manifests a knowledge of the powers of harmony and modulation, not inferior to Haydn. The style of composition from the pen of the more recent Beethoven, is so perfectly new and sublime, that it surpasses every thing hitherto conceived. 'He trod in no man's steps, moved in no prescribed limits, and adopted no established compositions.' No writer has made so great use of abrupt modulations, or produced so many changes on the same fundamental base note. (See "Gardiner's Music of Nature.")

A composition for one voice or instrument, is called a *solo;* for two, a *duo* or *duet;* for three, a *trio;* for four, a *quartet;* for five, a *quintet*, &c. Each of these in addition, may and usually does have subordinate parts as accompaniments. Compositions may be for instruments only, as symphonies, sonatas; for voices only, as anthems, chants, psalm tunes; or for the two united, as choruses, cantatas, &c. A composition for voices, does not, of course, exclude instruments; only the instruments must be subordinate. (See ACCOMPANIST.)

COMPOUND TIME, two or more measures of triple time joined into one. (See MEASURES.) Ex:



CON, (Ital.) with, together ; as *con spirito*, with spirit.

CONCERT, a performance of vocal or instrumental music, or both combined.

CONCERTANTE, (Ital.) a composition in which two or more parts are of equal importance, or in which the principal melody exchanges performers ; in the dialogue style, with accompaniments for a band.

CONCERTINO, principal, or first ; as, *violino concertino*, the first violin.

CONCERTO, (Ital. concert,) a composition to display the powers of some particular instrument, with accompaniments for an orchestra. *Concertos* are written in a complicated style, and designed to show off the skill of the performer ; who plays, sometimes with a single instrument as an accompaniment, and sometimes with a full orchestra.

CONCERTO GROSSO, (Ital.) grand concert, applied to those parts of a *concerto* in which the secondary instruments are introduced, to give variety and interest by the contrast.

CONCERTO SPIRITUALE, (Ital.) a concert of sacred music.

CONCHA, (Lat.) a musical shell used as a trumpet.

CONCINNOUS, applied to discords not very disagreeable, and which may be used in music.

CONCITATO, (Ital.) agitated.

CONCORD, those sounds which when heard together are pleasing to the ear. They are the third, fifth, and eighth, and their inversions, the sixth, fourth, and unison. The *perfect* concords are the eighth, fifth, and fourth when not a suspension. The *imperfect* concords are the third and sixth. The perfect intervals cannot be altered by a sharp or flat, without becoming dissonant ; but the imperfect can

be altered from major to minor and the contrary, and still remain consonant.

CONCORDANT, consonant. Also a baritono voice, between the tenor and base. (*not used.*)

CONDUCTOR, the person who presides at the organ or piano forte, to regulate and ensure an exact performance; also applied to the person who arranges, orders, and directs the necessary preparations for a concert.

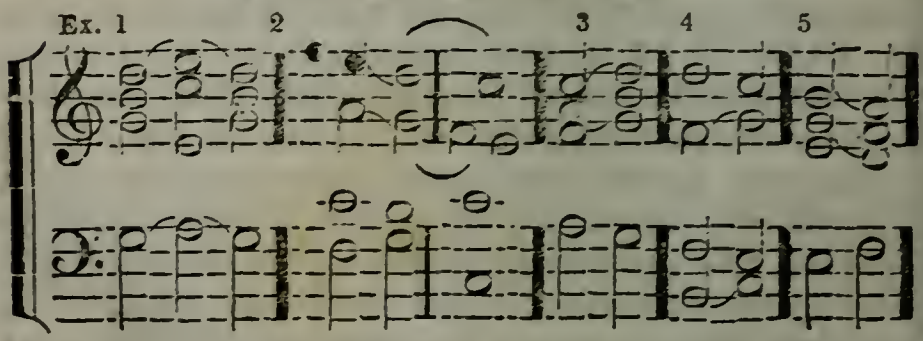
CONDUCTORS, tubes to convey air to organ pipes at a distance.

CONJOINT, } (Lat. *jungo.* to join, and *con*, to-
CONJUNCT, } gether,) a term applied to notes which proceed by the successive degrees of the scale. In ancient music, two tetrachords in which the highest sound of one was the lowest of the other, were styled conjunct.

CONSECUTIVE, a term applied to two chords which immediately succeed each other, chiefly confined to perfect intervals.

1 CONSECUTIVE FIFTHS, when in two successive chords, the intervals between the same parts, moving in similar but not in parallel motion, are fifths, they are called consecutive fifths; a progression strictly forbidden in harmony. Ex. 1 to 5.

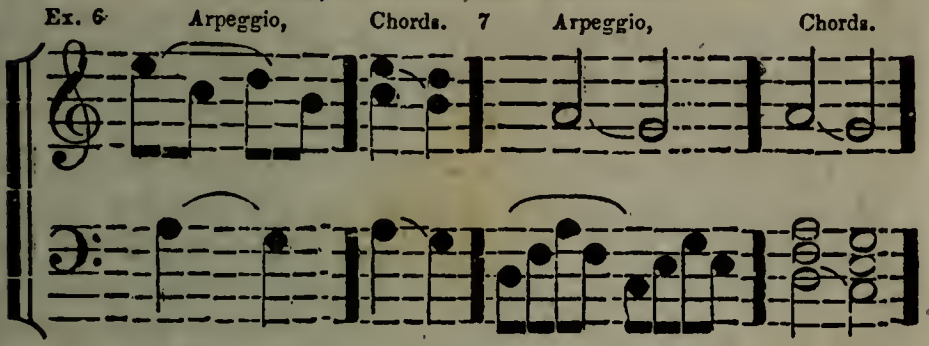
FIFTHS DIRECT AND DISALLOWED.



These are called *direct fifths*, because they are visible to the eye.

Indirect fifths occur, when the successive accented notes of an arpeggio are fifths to another part. These become direct fifths when written in chords, and are therefore disallowed. Ex. 6 and 7.

FIFTHS, INDIRECT AND DISALLOWED.



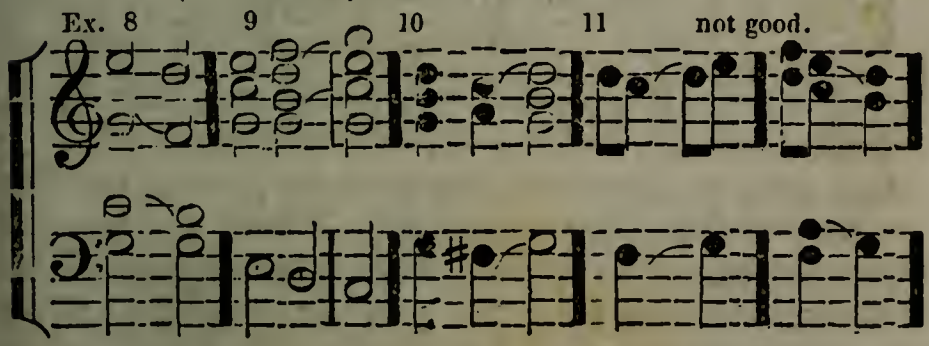
Two successive fifths are allowed ;

(1) When the latter fifth is imperfect, Ex. 8.

(2) When the first is imperfect, and they occur between two upper parts, both of which move upwards, Ex. 9 ; or when the first is produced by a chromatic semitone, Ex. 10, and Ex. 4 in full harmony.

(3) When the latter is very short, discordant or transient, they are sometimes allowed, but even then not good, Ex. 11.

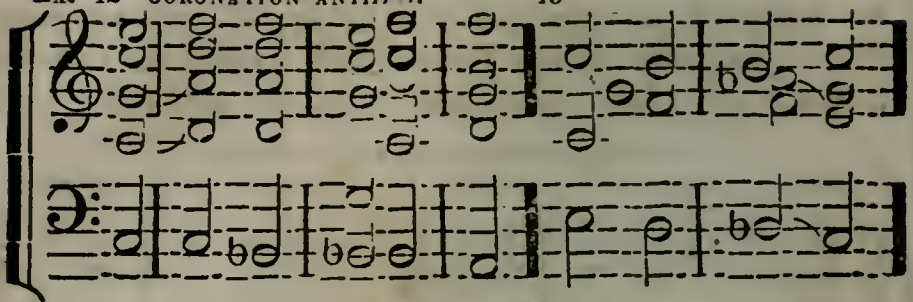
FIFTHS, DIRECT AND ALLOWED.



(4) When one of the chords is so dissonant, that the fifth is not perceived, Ex. 12 ; or when the first is the diminished seventh, so circumstanced as to leave the ear in doubt whither it will lead, Ex. 13.

FIFTHS ALLOWED.

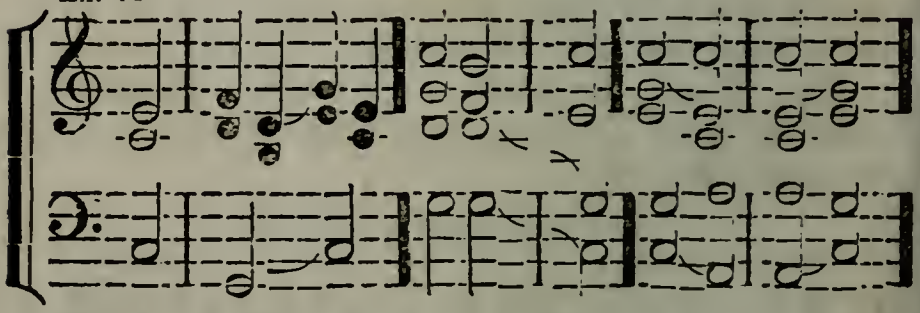
Ex. 12 CORONATION ANTHEM. 13



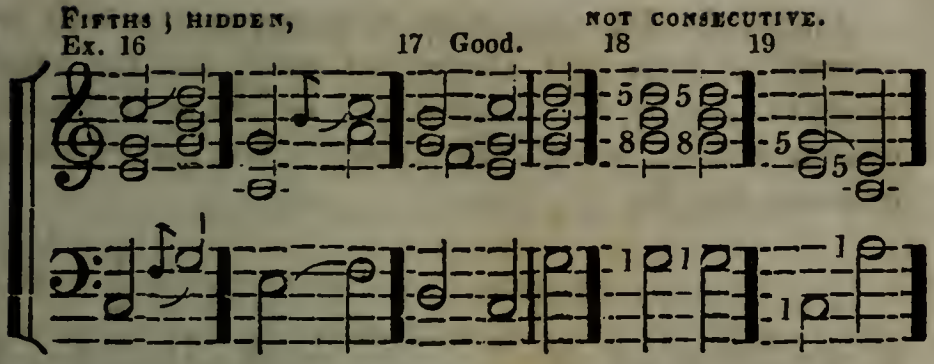
If the parts move by a skip of a fifth or fourth, Ex. 14, or if the successive chords are the relative major and relative minor, Ex. 15, particularly when the latter chord is on the unaccented part of the measure and the fifth is in an intermediate part, the bad effects of the consecutive fifths is not so much perceived; but Ex. 15 is not to be found in the best models.

BY SKIPS. TOLERABLE.

Ex. 14 15

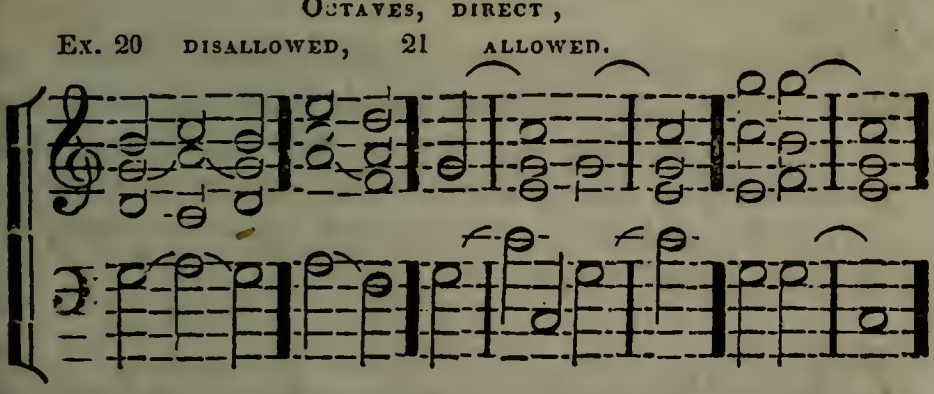


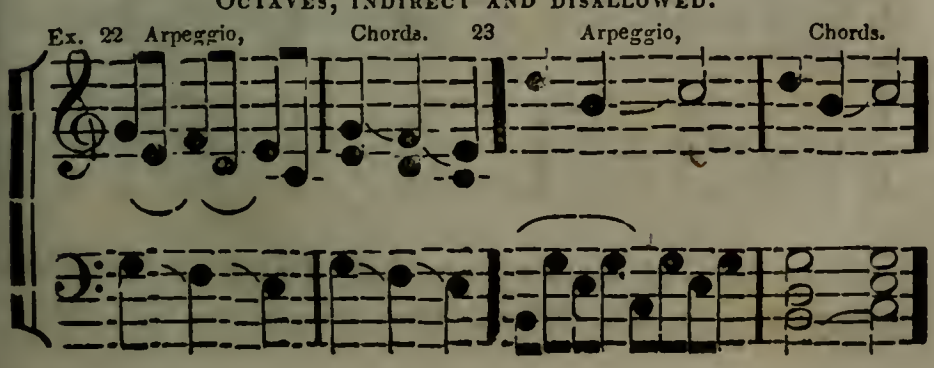
Hidden fifths occur, when the two parts have a similar motion, and the second interval is a fifth. In this case, consecutive fifths arise by placing transient notes between the two chords. These are but little noticed except in duets. The only one directly bad takes place, when the two parts have an upward motion from an octave or a third to a fifth, Ex. 16, where the fifth is marked by a transient note. Even this is sometimes allowed in the intermediate parts: and in the extreme parts, when an imperfect cadence is made, it is good. Ex. 17.



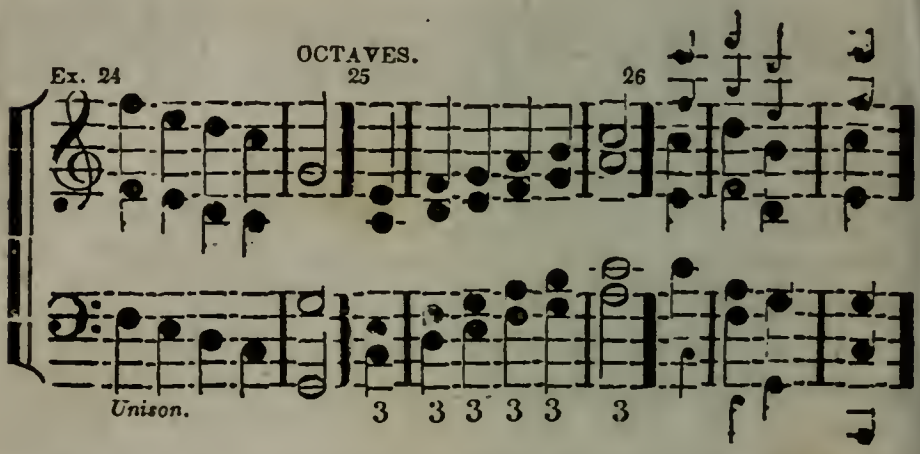
When the motion is parallel, Ex. 18, 5, 5, or contrary, Ex. 19, and 29, 5, 5, the fifths are not called tive, and the rules do not apply. Good taste, however, forbids their use in thin harmony.

II. Consecutive octaves, two successive octaves, under like circumstances as the fifths, are also forbidden, Ex. 20; but when the two parts proceed from the fifth of the key to the key note they are allowed, Ex. 21, the opposite motion, however, is better.



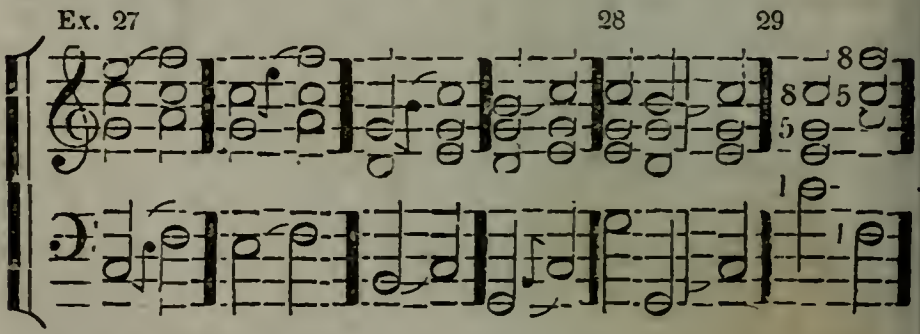


This rule does not refer to passages in which no chords or none but thirds are used, and the parts move in octaves, Ex. 24 and 25; or to a double base, or octave flute, which accompany their principals in octaves, Ex. 26.



None but an extreme part can be played in octaves in Ex. 26, unless the extreme part is also played.

Hidden octaves occur as hidden fifths. When the parts move upwards from thirds or sixths to unisons or octaves, Ex. 27, the octaves are very perceptible, particularly in thin harmony and on the unaccented part of the measure; at cadences, however, they are perfectly good, Ex. 28.



For parallel motion, see Ex. 18, 8, 8; and contrary motion, Ex. 29, 8, 8.

CONSEQUENT, the imitative part in a fugue or canon, in distinction from the subject.

CONSERVATORIO, (Ital. *conservare*, to preserve,) a name applied to a music school for children, in Italy, designed to preserve and propagate a correct style.

CONSONANCE, an agreement of sounds. (See CONCORD.)

CONSONANT, (Lat. *sono*, to sound, and *con*,) harmonious, agreeable to the ear; applied to the intervals used in common chords.

CONSTRAINED, limited, restricted. (See CONSTRAINED BASE.)

CONTINUATO, (Ital. continued,) held on or sustained with unvaried force; also, in uniform time.

CONTINUO, (Ital.) continued: *Continuo Basso*, continued base, (which see.)

CONTRA, (Ital. prep.) against; under. (See COUNTER.)

CONTRA BASSO, (Ital.) (See COUNTER BASE.)

CONTRALTO, (abbreviation of *contra alto*,) the alto or counter tenor.

CONTRAPUNTIST, a musician skilled in counterpoint.

CONTRAPUNTO, (Ital.) counterpoint.

CONTRARY. (See MOTION.)

CONTRAST, the different style of the several movements; as the *piano* and the *forte*, the *cres.* and the *dim.*, the labored and the simple; employed by the composer to awaken the attention and interest the feelings.

CONTRE DANSE, (Fr.) a lively air in common time, suitable for dancing; so called, because the parties stand in pairs opposite to each other.

CONTRIVANCE, the proper disposition of the parts with regard to each other, so that they may

mingle agreeably and with freedom, and produce the desired effect.

COPYIST, one whose profession is to copy music. The most important requisite is to make the heads of the notes distinct, and place the parts, as they move together, directly under each other.

COR, (Fr.) a horn.

CORDATURA, the scale of the open strings of any instrument. (See ACCORDATURA.)

CORNET, a wind instrument now little known, having given place to the hautboy; there were three kinds of cornet, the treble, the tenor, and the base. The name of an organ stop, of the reed kind, with three ranks of pipes. (See ORGAN.)

CORNIST, a performer on the horn; also a professor.

CORNO, (Ital.) a horn; plural, *corni*, horns, for horns.

CORNO BASSETTO, (Ital.) an uncommon but soft toned wind instrument of the reed species, and made of wood; called by the Germans, *basset horn.*

CORNO DI CACCIA, (Ital.) the hunting or bugle horn.

CORO, (Ital.) chorus, (which see.)

CORONA, (Ital. a crown,) a pause. (See PAUSE.)

COTILLON, a lively animated dance, in 6:8 time.

COUNTER. This word is added to such different parts, as serve for under parts; though not always bases, yet serve to produce contrast or opposition to the principal part; and, as it were, sing or play against or under it. Thus, when the subject is in the treble, the tenor against or under it, is called counter tenor.

COUNTER BASE, the lowest of two bases, and performed by the double base, or sub-base. Counter

base denotes also a base voice of a deeper tone than the base, and is in effect the same to vocal music, as the double base is to instrumental.

COUNTER FUGUE, a fugue in which the subjects move in contrary directions. (See FUGUE.)

COUNTER TENOR, the alto, or highest natural male voice; so called, because it acts as a support or base to the treble. Its compass is from D in the base to B in the treble staff.

COUNTERPART, one of two parts considered relatively to another.

COUNTERPOINT, the combination and progression of musical sounds, agreeably to the established laws of harmony. This term takes its origin from the ancients, who, before the invention of musical notes, made use of points, placed one *against* the other, both to designate harmony in general, and to distinguish one or more subjects composed upon a given theme. (See HISTORY OF MUSIC.) The given subject may be placed either in the treble, base, or tenor: the counterpoint therefore is as effectual below as well as above the subject. (See HARMONY.) A knowledge of counterpoint is absolutely necessary to a composer. It is so much an art, that to be a learned contrapuntist, is, among musicians, a title of no small excellence. The term connterpoint is now little used.

FIGURATIVE COUNTERPOINT, is when several notes, in one part, are placed against a single note in another. Formerly, only one point in each part, was placed against another, which was called *simple* or *plain counterpoint*, and is now used in choral music.

COUNTRY DANCE, a lively pointed air, suitable for dancing. No particular measure or style is required; so that any common song or tune, if sufficiently cheerful, may be adopted. (See CONTRE DANSE.)

COURANTE, (Fr.) an air in 3 : 4 time, moving by quavers, and consisting of two strains ; each commencing on the unaccented part of the measure.

CREDO, (Lat. I believe,) the name of a mass commencing with this first word of the creed.

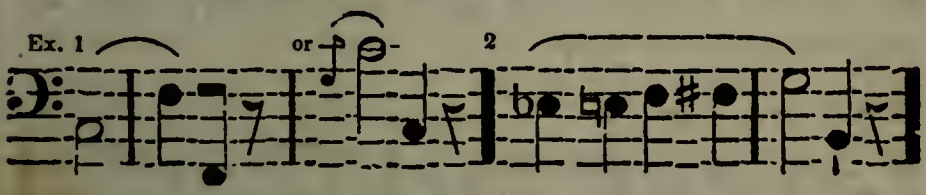
CREMONA, a town in Italy, where the best violins were made by the Amati (see AMATI,) and others ; hence the name, *Cremona*, is applied to violins of a very superior tone, supposed to have been made at that place.

CRESCENDO, (Ital.) a gradual increasing of the sound. (See CHARACTERS 11, Ex. 41, & DYNAMICS.)

CRIES, the artless tones of the common people, in proclaiming their articles of trade, formerly much in vogue in large cities. These cries are founded on the natural exclamations of the voice, rendered loud and melodious by much practice. Since the noise of carriages and the din of traffic has increased, these intonations have died away, and are scarcely heard, except in the quiet of the morning, and in the most solitary parts of the city. These cries consist of a few of the most melodious and easy notes of the scale, and their beauty consists in the clear swell and dying away of the principal tones. Observing musicians have derived many beautiful melodies from these cries. For a list of them, see " Gardiner's Music of Nature." In this work are also delineated the,

CRIES OF ANIMALS. They are their instinctive tones, which naturally express joy or grief, boldness or fear, and all their various wants. Surly animals growl in semitones, which are also much used to express grief and fear, and all sorts of complaints ; while those notes which are uttered merely for pleasure, include larger intervals. The dog species, in their natural state, only whine and growl ; and their barking is an acquired faculty which they obtain by associating

with man. The dog indicates his different feelings by the different tones of his voice; which are so marked, that they are easily recognised as expressive of anger or fear. The horse knows, from the bark of a dog, when he may expect an attack upon his heels. (See "Library of Entertaining Knowledge.") The lowing of cattle 'though rude and rough, is music to the farmer's ear; save one, who moans the loss of her sportive young, with wandering eye and anxious look, she grieves the live-long day.' Ex. 1 expresses the former, and Ex. 2, the latter.

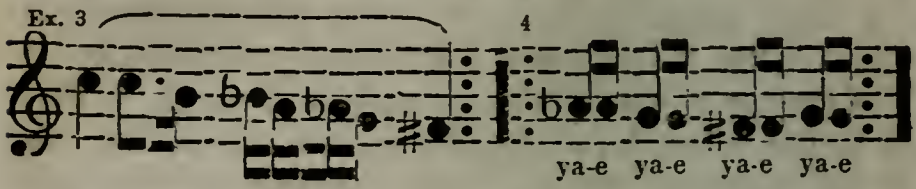


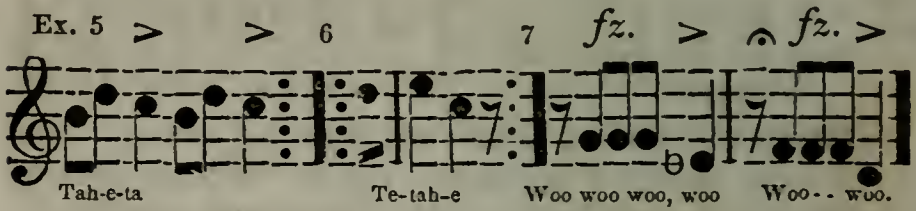
The horse has but little variety in his tones. His shrill and piercing whinney passes through every semitone of the scale; and this, with little variation, is his only song. The tones of the ass resemble in their compass and variety, those of a horn. The notes of all these and many other animals have been imitated by modern musicians. (See "Gardiner.")

Human cries. The ear of the musician is constantly awake to every sort of sound; but none excite his attention more than the exclamations of the human voice; a class of sounds little noticed by composers of a former age. We can scarcely turn over a page of Haydn, Mozart, or Beethoven, but we find traces of these passionate tones. These exclamations, Gardiner has attempted with ingenuity and considerable success, to reduce to notes.

Children have no difficulty in expressing their wants, and their pleasures and pains, by their cries, long before they know the meaning and use of a word. If we attend to their sounds, we shall soon

discover what a fruitful source they have been in giving hints to the composer and the musician. Ex. 3 is the puling of a spoiled child; Ex. 4, the little spiteful voice of one child teasing another.



We derive some of our first germs of melody from the spontaneous songs of children. Ex. 5 and 6, are the natural ebulitions of mirth and gaiety, sung by children while at play.

Ex. 7 represents the sudden growling of the voice on its lowest tones, by which children, in their gambols, attempt unawares to frighten each other.

For the use which the greatest modern musicians have made of these tones, see "Gardiner."

These remarks show clearly the capacity of all children to distinguish and practise nice grades of sound, in order to produce a particular effect; which they could not do, if their organs were so defective that they could not learn to sing.

CROOKS, moveable curved brass tubes, which are occasionally applied to trumpets and horns, for the purpose of tuning them to different keys. The name of the key is marked on each.

CROSSING OF PARTS. (See Score.)

CROTCHET, a note equal to a quarter of a semibreve. (See Characters.)

CURFEW, the evening bell.

CYMBAL, (Lat. cymbalum,) an instrument of percussion, of the ancient Greeks and Hebrews; supposed to be the same as our kettle drum; round, and made of earth and sometimes of brass.

CYMBALS, military instruments of percussion, made of brass or other elastic metal, held in the hands, and struck together to mark the time.

CYPHERS, characters placed above or below a base to denote the accompanying chord. (*little used.*)

D.

D, the second note of the natural diatonic scale, to which the French and Italians apply the syllable *re.*

D. in French, is the same as P. in Italian. (See Doux.)

DA, DAL, (Ital.) a preposition; from, from the; for, to.

DA CAMERA, for the chamber; *i. e.* music for the chamber.

DA CAPELLA, for the church, in the church style.

DA CAPO, or D. C. to the beginning. (See Capo.)

DAL SEGNO, to the sign of repeat. (See Segno.)

DAL TEATRO, (Ital.) in the style of theatrical music.

DAMPERS, in a piano forte, are small pieces of wood with cloth or leather at the bottom, which, fall-

ing on the strings, when the fingers are lifted from the keys, intercept the vibrations of the strings. Dampers are sometimes attached to a pedal, by which they are brought into contact with the strings, to stifle the sound.

DANCE, a melody of a lively character, suitable for dancing. Dances have different names; such as, waltz, minuet, saraband, cotillon, reel, hornpipe, &c. (which see.)

DASH. (See FIGURING CHORDS.)

DECACHORD, (Gr. *deca*, ten, and chord,) a harp or lyre with ten strings.

DECIMA, (Ital.) the tenth.

DECIMOLE, a group of ten notes. (See TENS.)

DECLAMATION, in vocal music, is the art of adapting the music to the words; and applies both to the composer and the performer. (See ACCENT and EXPRESSION.)

DECRESCENDO, (Ital.) decreasing, opposed to crescendo. (See DIMINUENDO.)

DEEP, low, grave; that quality of tone which is produced by a slow vibration, in opposition to acute.

DEGREE, each line and space of the staff is called a degree; hence, in five lines and four spaces, there are nine degrees. When two notes are at the distance of a second from each other, the degree is said to be *conjoint* or *conjunct*. When the notes are at the distance of a third or any greater interval, the degree is called *disjoint* or *disjunct*. We count the degrees by the diatonic scale, and name them by the distance above the key note; thus, the supertonic is called the second, the dominant the fifth, and the tonic the first degree of the scale; and, an interval of a second is of one degree, a third of two degrees, &c.

DEL, (Ital.) preposition; of the, by; as, *del Corelli*, by Corelli.

DELICATEZZA, (Ital.) delicacy.

Con DELICATEZZA, in a soft and delicate style.

DEMI, half; (see Semi.) Applied to intervals, it denotes that they are diminished half a tone, or that they are minor.

DEMI CADENCE, a term used in church music, denoting an incomplete or imperfect cadence. (See Cadence.)

DEMI DITONE, a major third diminished a semitone; that is, a minor third. (See Ditone.)

DEMISEMIQUAVER, half a semiquaver, (see Characters 13, Ex. 10.)

DERIVATIVE, taken from others; not primitive, nor fundamental.

DERIVATIVE CHORDS, chords not fundamental. (See Chords 9.)

DERIVED RELATIONS. (See Relations.)

DESCANT, originally denoted an extemporaneous melody; but afterwards, the art of composing in parts. (*little used.*) (See Counterpoint.)

To DESCEND, to pass from acute to grave; on the key board, it is to proceed from the right to the left.

To DESCRIBE, to mark the time with the hand, and at the same time to name the beats.

DESIGN, is the invention and conducting of a subject; the disposition of each part, and general arrangement of the whole. It is not sufficient to compose beautiful airs, and a pleasing harmony. All this must have reference to a principal subject, to which all the parts must be subjoined, thus making a complete whole. Unity should reign in the principal melody, in the movement, the character, the harmony, and the modulation. The difficulty is to unite these precepts with a pleasing variety; without

which, the whole becomes dull and uninteresting. Every thing may be ventured for this purpose, provided the whole is not broken into detached portions. It is in a well extended distribution, in a just proportion between all the parts, that the perfection of design consists. This general design is to be separately applied to each part. For this purpose, after having fixed on a subject, we infuse it, according to the rules of progression and in so definite a manner into every part to which it should be extended, as not to be effaced from the mind of the audience; and still not to present itself to the ear, but with all the graceful beauties of novelty. It is a fault in design to suffer the subject to be forgotten, and a much greater one to continue it until it becomes disgusting. To fulfil the design in performance, every voice and instrument must execute its particular part exactly in the style assigned to it. There must be no *effort* at display; but if it is made, it must be done naturally, and according to the expressed design of the piece. (See Choir and Accompanist.)

DESSUS, (Fr.) the highest part in music; the *soprano* or principal melody. (*little used.*)

DESTRA, (Ital., Lat. *dextra,*) the right hand.

DETACHED, one sound separated from another by a silence more or less sensible. (See Staccato.)

DI, (Ital.) preposition; of, from, &c.; as a prefix, a contraction of dis; (which see.)

DIA, (Gr.) preposition; out, through, throughout, against.

DIAGRAM, (Gr. *grapho*, to write, and *dia*, out,) the name given by the ancients to the table exhibiting all the sounds of their system.

DIALOGUE, a composition in two parts, either for instruments or voices, which alternately respond to each other, and occasionally unite. Applied to a

melody, it is the distribution of the principal subject between two or more voices or instruments, or between a voice and an instrument.

DIAPASON, (Gr. *dia*, through, and *pason*, all,) the Greek term for the interval of an octave, because it contains all the notes of the scale. The term has now various meanings. It is applied to the rule or scale by which certain instrument makers determine the dimensions of their pipes and other parts of their instruments. It is also used to express the compass of a voice or instrument; thus, when the voice is forced, it is said to be beyond its diapason or natural tone; and the same is said of an instrument, whose strings are too loose to make a distinct sound, or too tight to make it agreeable. But the common meaning is, certain stops of an organ, which are called diapason because they extend throughout the compass of the organ.

DIAPENTE, (Gr. *dia*, and *pente*, five,) Greek term for the perfect fifth.

DIAPHONIA, (Gr. *dia*, against, and *phonos*, sound,) Greek term for dissonance. (See Symphony.) Guido used the term for descant.

DIASCHISMA, (Gr. *diaschizo*, to divide,) the interval of half a minor semitone.

DIATESSARON, (Gr. *dia*, and *tessaros*, four,) the Greek term for the perfect fourth.

DIATONIC, (Gr. *dia*, and *tonos*, tone,) passing through by natural tones; a term applied to the scale proceeding by natural or without chromatic intervals, or including tones and major semitones without alterations. (See Scale.)

DIESIS, the interval, in the enharmonic scale, between the sharp of any note, and the flat of the note above; sometimes called a quarter-tone. (See Interval.) By the Greeks, *diesis* was used for the

smallest interval used in their music: and in modern music, it is sometimes used as synonymous with a sharp.

DILETTANTE, (Ital.) an amateur.

DILUENDO, (Lat.) diminishing to silence. (*little used.*)

DIMINISHED INTERVAL, a minor interval lessened a semitone. (See INTERVAL.)

DIMINUENDO, (Ital. *diminuo*, to diminish,) gradually diminishing the sound. (See CHARACTERS 14, Ex. 42, and DYNAMICS.)

DIMINUTION, the opposite of *augmentation*, implying that the imitation or reply is in notes half as long as those of the subject itself.

DIMINUTIVE NOTES, small ornamental notes, whose time is not counted in the division into measures, but which borrow their time from the notes with which they are connected. (See ORNAMENTAL NOTES.)

DIRECT. (See CHARACTERS 15, Ex. 35.)

DIRECT CHORD, that in which the fundamental note is the lowest, in distinction from inverted.

DIRECTOR, the person who has the general management, such as selecting the pieces, appointing the time of performance, &c., but not necessarily a scientific or practical musician.

DIRGE, a solemn and mournful composition, performed on funeral occasions; much used by the ancient Greeks and Romans.

DIS, (Gr.) twice, two; also implying the idea of disagreement or separation; it is also a Latin prefix, meaning asunder, and frequently has the force of a negative; the opposite of *con.*

DISALLOWANCE, an improper progression in harmony; such as consecutive fifths and octaves, and false relations; and all such as are prohibited by a cultivated ear.

DISCANT, same as treble, used by the Germans.

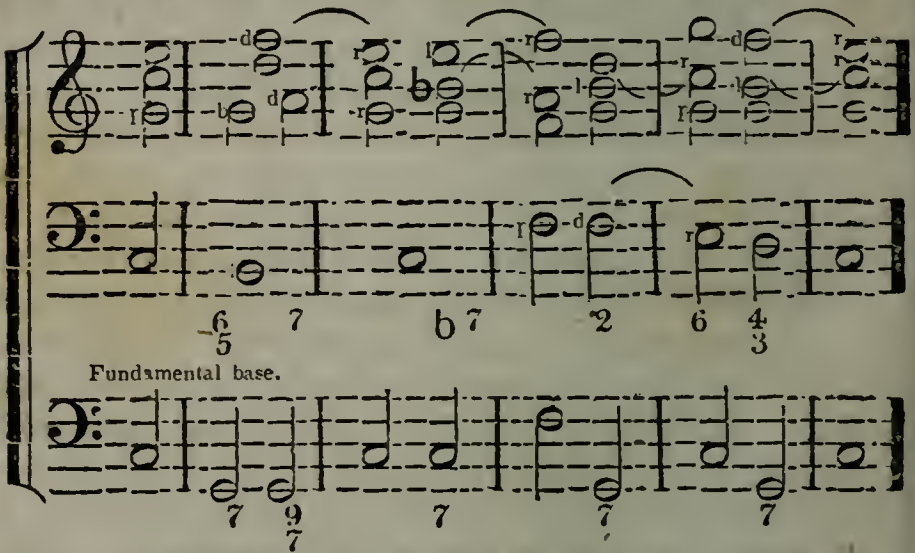
DISCANTIST, a treble singer.

DISCORD, (*dis*, and *chord*,) a disagreement of sounds. When two or more sounds, heard together, and separated from other chords, produce an unpleasant effect on the ear, they are called *discordant*. All the natural chords, page 77, except the A, B, and C chords and their inversions, and most of the artificial chords, pages 81 and 82, are discords. As discords are essentially unpleasant to the ear, they require to be followed by a concord, in order to produce satisfaction. When a discord is properly managed, that is, preceded and followed by a nearly related concord, the pleasing effect is much heightened by the contrast. The ordinary ear will not bear to be held in suspense too long by discords; else, the anticipated gratification will be lost, as the ear grows weary by listening. It is a *forced* cultivation of the ear, acquired by some musicians, which demands numerous and long protracted discords to satisfy it. In harmony, those discords are the best, one or both* of whose discordant notes are heard in the previous chord; which is called the *preparation* of the discord; (see notes marked 'p,' in the examples.) All natural discords, except the dominant seventh, are generally prepared; yet, to produce a particular effect, they are often struck without, Ex. 4. All other discords must usually be prepared. (See CHORDS, Ex. 36, p. 90.) The *resolution* of a discord is the most important part of it; this is constrained to fixed rules, which are never violated, except in abrupt modulations, Ex. 2, and 4; and at the end of a strain on the accented part of the measure, Ex 3. In the latter case, the next strain after the

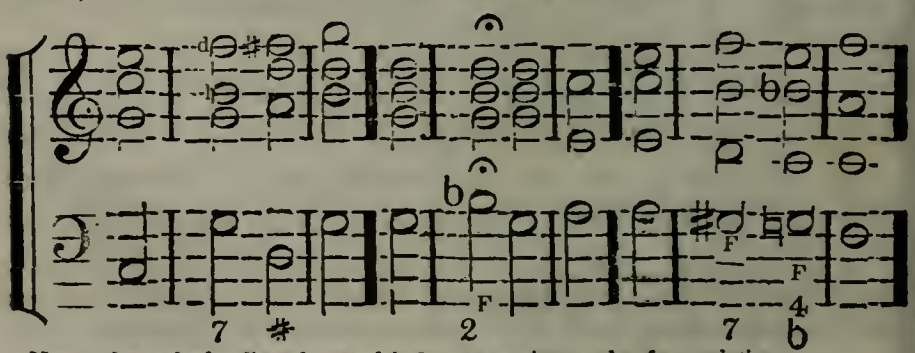
* By *both* is meant the upper and lower note of the discord, so used to meet Kollman's idea of preparations; though, strictly speaking, only one of the notes is discordant. The lower note prepared, is marked 'b.'

pause should commence peculiarly harmonious and grateful to the ear, Ex. 3, A, B. The essential notes of all discords, (see 'd' in the examples,) are those which have a fixed motion in the resolution; and, in addition to this, when the third above the fundamental note is major, in what part soever of the chord it occurs, it is usually a leading note (see 'l' in examples;) and, in the resolution, must ascend one degree: while, on the other hand, the seventh and ninth above the fundamental, must descend one degree, (see 'r' in the examples.) An altered sharped note leads to the next note above; and flatted, to the next note below, Ex. 1 and 2.

Ex. 1 A D^1 H^1 A D A D^3 A^1 D^2 A



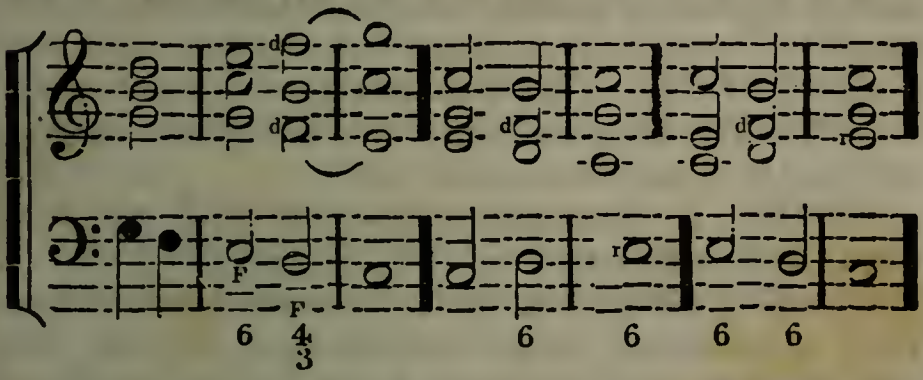
Ex. 2 A D A A 3 A D^3 A B 4 B I^1 D^2 A



Note; d stands for discord, p and b for preparation, and r for resolution.

These notes, which have a fixed motion in the resolution of a discord, must not be doubled: otherwise, consecutive octaves will occur: the seventh in the dominant chord, however, is sometimes doubled by the best composers, when the parts have a contrary motion, and the base is the fifth above the fundamental, Ex. 5, 'd'. In full harmony, the discord may occur in one part and the resolution in another, provided the discord is not in the upper part. Ex. 6 and 7.

Ex. 5 A A^1 D^2 A 6 A D^2 A^1 7 A^1 D^2 A



The discords usually occur at cadences. (See CADENCE.) If the proper chords are taken to form a cadence, and care is used to avoid consecutive fifths and octaves and the upward resolution of the sevenths and ninths of the fundamental notes, errors will seldom occur. The nature of the cadence will determine the motion of the fundamental base; and the several parts must take such notes as belong to the corresponding chords. These, with the exception of the interrupted cadence, (which see,) are such as to allow the regular resolutions.

The resolutions of the artificial discords, are determined by their nature; thus, if a note is suspended or retarded, it must of course resolve itself into the note which it retards. (See SUSPENSIONS, PEDAL NOTES, &c.

DISCORDANT, a term applied to a voice or instrument out of tune.

DISJOINT, } (Lat. *junctus*, joined, and *dis*,) not
DISJUNCT, } joined, a term applied to two notes which are separated from each other by more than one diatonic degree, or when they proceed by a skip. Two tetrachords, in ancient music, were disjunct, when the highest note of one was a tone lower than the lowest note of the other.

DISSONANCE, a discord.

DISSONANT, (Lat. *dis*, and *sonans*, sounding,) a term applied to an interval whose notes form a discord.

DISTANCE. (See INTERVAL.)

DITONE, (Gr. *dis*, two, and *tonos*,) two tones; the ancient term for a major third.

DITTY, a short and simple air, of a plaintive melancholy character.

DIVERTIMENTE, (Ital. diversion,) a short and easy composition, either instrumental or vocal, designed rather to please the ear, than to display talent.

DIVERTISEMENT, (Fr.) a term applied to short airs and dances, introduced between the acts of an opera.

DIVISION, a rapid succession of notes, either diatonic or chromatic; applied in vocal music to one syllable, and to be sung at one breath. The performance of such a passage is called *running a division*.

DIVOTO, (Ital. pious,) in a grave solemn style, suited to inspire devotion.

DO, the Italian monosyllable used in solmization, substituted in the place of the *ut* of Guido, as more smooth and soft.

DOCTOR OF MUSIC, the highest honor conferred by literary institutions, on distinguished musi-

cians. One necessary qualification, in the English universities, is, to compose an exercise in eight vocal parts, with instrumental accompaniments, to be approved by the musical professor, and publicly performed.

DOLCE, (Ital. sweet,) implies a soft, smooth and delicate quality of tone. On the violin, this is done, by drawing a light and swift bow over the strings, near the finger-board. Before this can be obtained by the voice, the organs must be brought into the most pliant state, and used with the greatest delicacy. When this term is applied to instrumental music, the performer cannot better express it than by taking such vocal tones as his model.

DOLCEMENTE, (Ital. sweetly,) in a soft graceful style.

DOLCEZZA, (Ital.) sweetness.

CON DOLORE, } (Ital. *dolore*, sorrow) in a plain-
DOLOROSO, } tive style, expressive of grief and sorrow.

DOMINANT, (Ital. *domino*, to rule,) the governing note of the scale; the fifth, termed dominant, because it predominates in a piece of music, and generally precedes the tonic, and leads to a cadence.

DOMINANT CHORD, the common chord; and,

DOMINANT SEVENTH, the chord of the sev-

DOPPIO, (Ital.) double.

enth, on the fifth of the key, leading to a full cadence. (See CHORD.)

DOT, DOTTED NOTE. (See CHARACTERS.)

DOUBLE, an ancient term for variation. Now used for a breve, a note equal to two semibreves. (See CHARACTERS 8, Ex. 4.)

TO DOUBLE AN INTERVAL, is to take its octave, either above or below, together with the note itself.

DOUBLE BAR, DOUBLE DOT, DOUBLE

FLAT, DOUBLE SHARP, &c. (See CHARACTERS.)

DOUBLE BASE. (See VIOLONO.)

DOUBLE C, &c. (See SCALE.)

DOUBLE CHORD, a chord of two notes. On the violin, to play double chords, is to play two parts; which, when it can justly be done, has often a great effect.

DOUBLE COUNTERPOINT, a species of composition in which the parts may be inverted, without transgressing the rules of harmony. When such an inversion cannot be made, it is called simple counterpoint. Formerly, when the principal object of the study of music appeared to be, to place a given subject in as many different positions as possible, when canons, fugues, &c. were in vogue, the reputation of having a complete knowledge of double counterpoint, was the highest honor the learned pedants sought to obtain. Now, though a knowledge of the principles of double counterpoint is necessary for a composer, yet it is regarded only as a means of affecting the design and expression of the given subject. (See COMPOSITION.) In double counterpoint, there were rules not only for the arrangement of the parts so as to be capable of inversion, but for all sorts of motion, direct, contrary, retrograde, and retrograde and contrary united. All this is now regarded as of little importance.

DOUBLE EMPLOI, a term used by Rameau for the two different ways by which the chord of the 5th and 6th on the subdominant may be explained; either as a fundamental chord with the sixth added; or as the first inversion of the supertonic seventh. The latter is the only true explanation.

DOUBLE FUGUE. (See FUGUE.)

DOUBLE MEASURE, a measure of two parts or beats. (See MEASURE.)

DOUBLE TONGUEING, in playing the flute, the action of the tongue against the mouth, by which a distinct articulation of the notes is produced. (See FLUTE.)

DOUBLED INTERVAL, any interval is doubled, which exceeds an octave; thus, the tenth is the double of the third, the twelfth the double of the fifth.

DOUX, French for *piano*.

DOXOLOGY, (Gr. *doxee*, praise, and *logos*, an ascription,) a short hymn of praise to God; as, 'Glory be to the Father, and to the Son, and to the Holy Ghost.'

DRAMATIC, an epithet applied to imitative music, suited to theatrical performances, or calculated to excite interest and passion.

DRONE, } a continued or sustained base
DRONE BASE, } note, heard throughout an air; peculiar to the bagpipe. Drone base, called also burden, is synonymous with pedal base.

DRUM, a pulsative instrument used in military music to mark the time. It is of a cylindrical form, hollow, and covered at each end by a dried skin, which is so attached to a rim that it may be tightened by means of cords or braces which pass, obliquely and alternatively, from rim to rim; these diverging cords are drawn together by sliding knots of leather, and thus the skins are tightened and the tone raised and rendered shrill. The *common* or *side* drum is suspended, from a strap round the neck, at the side of the performer, who beats with his two drum sticks, on the upper end or head. This instrument is of Asiatic orgin, and was brought into Europe by the Arabs. The *base* drum is much larger and deeper toned. It is suspended horizontally in front of the

performer, who beats the accented strokes with his right hand on one end, and the light strokes with his left on the other. The sound of the drum is produced both by the vibration of the column of air in the interior of the drum, which communicates with the exterior air, through a small hole in the side; and by the vibration of the distended parchment. On funeral and other solemn occasions, the drum is muffled, by covering the ends of the sticks with some soft substance, or by bringing something in contact with the head, so as to deaden the vibrations.

The music of drums is merely rhythmical, and consists only of the mode of beating the time. It may be written on one line; or the notes for the right hand, may be written above the line, and those below for the left. In an orchestra, drums can be used only in powerful bands, and none are effective but those of the largest size. When introduced to represent the roll of thunder, they are considered peculiarly grand. Some of the finest effects of the drum are produced by its pianissimo, which apparently removes the sounds to an immeasurable distance, and thus supplies the mind with idea of its vastness.

DRUMMER, he whose office it is to beat the drum.

KETTLE DRUMS, instruments of percussion, consisting of two large hemispherical basons of copper or brass, and covered with vellum or goat skin, which is held round the rim by a circle of iron, and tightened or relaxed by screws fixed at the sides for that purpose. In martial music, they are chiefly used by the cavalry, laid across the horse's shoulders, and beat by two iron rods, with balls at the extremities. They are always so tuned, that the sound of one is the key note of the piece accompanied, and that of the other the dominant or a fourth below. In compositions for

an orchestra, they are generally blended with trumpets. Kettle drums were not introduced into the English orchestras, until after the battle of Dettengen, in 1743. Among the spoils of war, was a pair of brass drums taken at that battle, which Handel employed in his grand 'Te Deum,' composed and performed in honor of that victory. This splendid composition opens with a symphony of considerable length, written purposely to show the warlike tones of these instruments. The strain consists of only two notes, D and A, which are simultaneously struck by the whole band, and have an imposing effect.

DUE, (Ital.) two; as, *a due*, for two voices or instruments.

DUET, } (Ital. *duo*, two,) a composition for
DUETTO, } two voices or instruments, which may have a base and accompaniments. In duets, the parts are not necessarily a principal and a second, nor necessarily similar in their motion. The best effects are produced by giving variety to the parts; by allowing them to cross or interchange, by giving the principal melody to the under part, by contrary motions, &c. The rules for this species of composition are most rigorous; certain passages which would be permitted in a piece of more parts, are forbidden in a duet. Duets for two performers on the piano forte, are very useful to practise playing in time; and have a very fine effect, as they give the harmony very full.

DULCIMER, a triangular instrument, consisting of a little chest, with about fifty wires strung across the top, the shortest about eighteen, and the longest about thirty six inches in length. It is played, by striking the wires with little iron rods.

DULCINO, a name formerly given to a small bassoon, used as a tenor to the hautboy.

DUMB SPINET. (See CLARICHORD.)

DUO, (Ital.) two. (See DUET.)

DUO DA CAMERA, a duet intended for private performance.

DUODECIMA, (Lat.) the twelfth.

DUR, (Lat. *durus*, harsh, shrill,) the German expression for major; as, *A Dur*, for A major.

DUTCH CONCERT, a medley in which every man plays simultaneously his own tune, producing an intolerably discordant effect.

DYNAMICS, (Greek,) force; the department in the practice of music, which consists in giving each tone that stress which the subject requires, including the loud and the soft, the swell and the diminish, the abrupt and the gentle, the staccato and the legato, &c.

Loud sounds are connected with ideas of power and danger. Many objects in nature, which have such qualities, are distinguished by such sounds. In the human voice, all violent and impetuous passions are expressed by loud sounds; on the contrary, *soft* sounds are connected with the ideas of gentleness and delicacy. The contrasts produced by the different degrees of force with which sounds are uttered, form the most prominent effects of musical expression. The rushing of the fortissimo brings with it dread and alarm; but in the pianissimo we feel the opposite sensation. The indistinctness of sounds apparently removes them to a distance. On this principle, the ventriloquist deceives the ear, by directing the attention to a given point, and making the sound correspond, in force, to a real sound proceeding from that point. Music to represent distant sounds is constructed on the same principle.

The gradual *increase* and *diminution* of sound, like the sound of a bell, (see CHIMES,) is peculiarly ex-

pressive. By the great increase of sound, the soul is aroused and alarmed. What is more alarming than the gradual increase of a mighty sound when it pours upon us from a distance, as a raging storm or the roar of battle! When the increasing force accumulates to excessive loudness, the vibrations become too great for the soul to bear. There is also a grandeur in the gradual decrease of sound; whether it is falling into silence, as at the close of a battle, or is departing from us, as at the retiring of a storm. Handel and the eminent modern composers, have made effective use of this element of composition. In a more humble but not less pleasing capacity, the gradual *swelling* and *dying away* of sounds, in vocal compositions, never fails to delight us. There is no accomplishment in the art of singing more fascinating. Farinelli is said to have moved his audience to a state of ecstacy by the manner in which he commenced his famous song, '*Son qual nave*;' 'the first note of which was taken with such delicacy, swelled by minute degrees to such an amazing volume, and afterwards diminished in the same manner to a mere point, that it was applauded for five minutes.' Modern composers, particularly Beethoven, have introduced this effect into church music. At the termination of some of the choruses in the posthumous Mass of the latter we find it applied: here the voices alone pour upon the ear with an effect like the swelling and dying away of a storm. The musical performances in the Catholic chapels of Europe, so often described by travellers, owe their effect to this approaching and retiring of sounds.

The *explosive* force, is a strong and striking feature in the character of modern music. We never find it expressed in any author before the time of Haydn. It has its origin in the ebullition of the pas-

sions: we hear it in the expressions of joy, rage, despair, &c.; indeed it is natural to persons under any violent emotions. Like all other forcible expressions, its meaning will depend on the situation and manner in which it is used. It properly belongs to the sublime, though it may be so burlesqued as to assume a ridiculous character. Sometimes its character is that of tenderness; but, as used by great composers in church music, its effect is rather that of violence. The various,

DYNAMIC DESIGNATIONS, are the

Accent, stress on the emphatic note:

Mezzo or *m*, mean or middle;

Mezzo forte or *mf.*, a little loud;

Forte or *f.*, loud and sustained;

Fortissimo or *ff.*, very loud; and *fff.*, as loud as possible:

Mezzo piano or *mp.*, a little soft;

Piano or *p.*, soft and sustained.

Pianissimo or *pp.*, very soft; and *ppp.*, as soft as possible:

Crescendo or *cres.* or , a gradual increasing of sound, applied to a long note or phrase;

Diminuendo or *dim.* or , a similar decreasing;

Swell or , a gradual augmenting and dying away of the sound:

Forzando or *fz.*, *sf.* or >, striking a sound with an explosive force, and rapidly diminishing it to softness;

Rinforzando or *rf.* or <, rapidly increasing, and abruptly terminating the sound.

(See these several terms, and "Manual of Instruction.")

E.

E. The third note of the natural scale, called *mi* by the French and Italians.

E, ED, (Ital. conj.) and; as, *Violino e flauto*, violin and flute.

EAR, the organ of hearing, by which we are capable of perceiving sounds. There is nothing in nature, which arouses our attention, or impresses our feelings, more quickly than sound; whether it is the tone of sorrow, the note of joy, the voices of a multitude, the roar of the winds or the waters, or the soft inflections of the breeze,—we are equally awakened to that sense of terror, pleasure, or pain, which sounds create in us. The organ, through which these sensations pass, is allowed to be as curiously wrought as any part of the human body. The ear is an instrument of the pulsatile order, and in action, similar to that of a drum. The external part of the ear is funnel shaped, so as to include the vibrations of many particles of air, and, by gradually compressing them, to increase the intensity of the vibrations or the loudness of the sound, as it approaches the drum of the ear. A hearing trumpet is constructed on the same principles, and answers a similar purpose. This part of the ear is turned forward, so as the more readily to receive sounds in front. Within the chamber of the ear, is a strained membrane drawn across the cavity, called the *tympanum* or drum of the ear; which is set into a vibratory motion by the impulse of the air. Within the tympanum, is a series of nicely adjusted small bones, one of which is in contact with it; through these, the sound is communicated to the brain. The effect of sound

on the ear is somewhat similar to that of light on the eye; and the knowledge we obtain of external objects, depends on practice and the use we make of these organs. It may be justly said, that we *learn* both to see and to hear; and this we do only by slow degrees.

To HAVE IN THE EAR, is to have so clear a conception of the sound or tune, as to distinguish it from all others, and to be prepared to strike it. The power we have of recollecting sounds, or calling up former impressions, is much greater in some persons than in others; owing to the more fixed attention given to them. Most persons have experienced that, when they have been delighted with a new air which rivets their attention, it will haunt them for days, and that without any effort of their own. If the ears of children are early cultivated, and pleasing airs with good moral words are early impressed on their minds, they will never be effaced. Their songs will be their companions through life, giving them consolation in times of affliction and trial, furnishing them with rational amusement for leisure hours, when otherwise they might be led astray; and, in circumstances of temptation, they will appear unbidden, and, by a silent warning which will not excite opposition, effectually deter from temptation and danger. See "Manual of Instruction."

SUSCEPTIBILITY OF THE EAR TO VERY HIGH AND LOW SOUNDS. When the vibrations of a sounding body are less numerous than about 16 in a second, (the tone of an open pipe about 70 feet long,) which is four octaves below C in the base whose vibrations are about 128 in a second, the ear loses the impression of a continuous sound; and perceives, first a fluttering noise, then a quick rattle, then a succession of distinct sounds capable of being counted. On the

other hand, when the frequency of the vibrations exceeds a certain limit, all sense of pitch is lost, a shrill squeak or chirp only is heard. And, what is very remarkable, many individuals, otherwise not inclined to deafness, are altogether insensible to very acute sounds. Nothing can be more surprising than to see two persons, neither of them deaf, the one complaining of the penetrating shrillness of a sound, while the other maintains there is no sound at all. Some can just hear a note four octaves above the middle E of the piano forte, while others have a distinct perception full two octaves higher. The chirp of the sparrow is about the former limit, the cry of the bat about one octave above it, and that of some insects probably more than another octave. The whole range of human hearing, comprised between the lowest notes of the organ and the highest cry of known insects, seems to include about nine octaves. It is probable, however, that it is not alone the frequency of the vibrations which renders shrill sounds inaudible. A body susceptible of vibrating with such intense rapidity, must be exceedingly small; hence not capable of giving sufficient impulse to the air to produce a sensible impression on the organs of the ear. Hence, too, the reason why a delicate ear, capable of vibrating exceedingly quick, will be thrilled with a very acute sound, while a dull ear, not capable of vibrating so quick, will perceive no sound at all. The susceptibility of the ear of different animals often appears different from that of man. Doubtless many insects utter and perceive sounds much above our comprehension; while other larger animals perceive distinctly only the lower sounds. It is well known, that the lion takes no notice of high shrill sounds, which are almost deafening to us, while the lowest tones of an organ excite his rage. Some

animals, like the hunting dog or the rabbit, acquire an astonishing sensibility to sounds. This is also the case with persons who have lost the sense of sight. See "Gardiner's Music of Nature."

MUSICAL EAR, an ear capable of justly appreciating musical sounds, which is offended at a dissonance, and pleased with a consonance. *To have an ear for music*, is to have a delicate sense of hearing, so that the ear becomes annoyed by faults, either of tone or measure; and struck with the beauties of the art, when they are heard. The ear is false, when, in singing out of tune, false tones are not distinguished from true. The word *ear*, when thus used in a figurative sense, has no plural. A musical ear is chiefly the result of cultivation, and depends mainly on early impressions. Infants who are placed within the constant hearing of musical sounds, soon learn to appreciate them. By practice alone can the discriminating powers of the ear be carried to the highest point of perfection. To accustom ourselves to listen with attention, is the first step to improvement. Without experience, none are capable of justly estimating the pitch or relative gradations of sound, as being high or low; the nicer distinctions are unintelligible to an unpractised ear. By pursuing a course of practical study, we may soon acquire a musical ear, and ultimately find no difficulty in determining the nicest gradations. For a fuller developement of this subject, illustrated by anecdotes, see "Manual of Instruction;" and "Gardiner's Music of Nature."

EARS, small projections on each side of the mouth of an organ pipe, to regulate the pitch, and prevent the air from escaping to the right hand or to the left. (See ORGAN.)

ECCLESIASTICAL, belonging to the church.

ECCLESIASTICAL MUSIC, music for the church, such as anthems, chants, oratorios, &c.

ECHO, the repetition of a sound or passage usually piano, by one voice or instrument, or by one on each part. In music for the organ, echo means that the swell is to be used, as a response to the great organ.

ECHO MELODIC, the repetition of the preceding passage in piano by a single voice or instrument, or particular stop of the organ; not reckoned in the rhythm.

EFFECT, the impression which the performance of a composition produces on the ear and mind. To produce a good effect, real genius, profound science, and a cultivated judgment are essential requisites. So much does the real value of music depend on the effect, that it is to this quality, every composer, compiler, and teacher, who desires distinction, should unceasingly attend. (See Expression.)

EIGHTEENTH, the double octave of the fourth.

EIGHTH, an octave. (See Interval.)

EIGHTHS, quavers; so called, because they are each an eighth part of a whole note or semibreve. (See Characters, Ex. 8, p. 67.)

ELASTIC, an epithet applied to that quality of bodies, by which, when they are acted on by any force, they tend to restore themselves to their natural form and position. This is an essential property of all musical bodies. The elasticity of most substances used in musical instruments, as strings and skins, is increased by tension. The only body perfectly elastic in its natural state is air, which is the vibrating body in all wind instruments.

ELEGIAC, (from *elegy*,) plaintive, affecting.

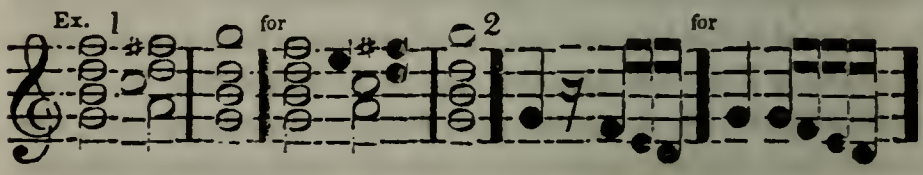
ELEGY, a simple, mournful, and affecting poem in lyric measure, set to plaintive music, and used on funeral occasions.

ELEMENTS, the first principles of a science or art. The business of instruction is to impart a thorough knowledge of the elements. If the elements are well understood, practice can render the execution complete.

ELEVATION, raising, as of the hand or foot in beating time, denoting the weak parts of the measure; also applied to the progression of the voice from grave to acute.

Sign of ELEVATION, the sharp ♯, so called, because it raises a note half a tone.

ELEVENTH, the octave of the fourth, used only in suspensions. In other situations it is regarded only as a fourth. (See Interval.)

ELLIPSIS, omission, taking away or passing over; *in harmony*, omission of one or more chords, Ex. 1; *in melody*, omission of a note, Ex. 2.

ELOCUTION, the connexion of words with musical sounds. Good elocution is necessary as well for the vocal musician as for the orator. Care should be taken in the selection of such words as are capable of musical expression, to which appropriate music should be set; and then the performer should take particular pains in the articulation of the words, and in the expression of the sentiment. (See Expression and Psalmody.)

EMBOUCHURE, (Fr.) the mouth hole; that part of a wind instrument to which the mouth and lips are applied, for the purpose of producing sound.

EMPHASIS, a particular force given to any unaccented note, (*a bad use of the term*, see Explosive

TONE ;) it is properly applied to the stress laid on the main accent or on the most important syllable of a clause ; sometimes whole sentences are emphatic.

EN, (Gr. prep.) in, according to; (Fr.) in the style of.

ENCHAINING OF CHORDS ; two successive chords enchain, which have one or more consonant intervals in common. (See PROGRESSION.)

ENCORE, (Fr.) again, once more ; an expression used by the audience at concerts, requesting an immediate repetition ; generally used in vocal performances.

ENERGICO, (Ital.) with energy.

ENHARMONIC, a term applied to a progression by quarter tones. (See INTERVAL and SCALE.)

ENHARMONIC TRANSITION. (See ABRUPT MODULATION.)

EOLIAN HARP, (Lat. *Æolus*, the god of the winds,) a stringed instrument whose tones are not produced by art, but by the direct action of the wind. (See HARP.)

EOLIAN MODE, (from *Eolia* in Asia Minor,) one of the ancient Greek modes. (See MODES.)

EQUAL, an epithet applied to that temperament in which the tones are divided into two equal semitones.

EQUISONANT, (Lat. *æquus*, equal, and *sonans*, sounding,) a term properly applied to unisons, but also applied to octaves from their near resemblance. (*little used.*)

EQUIVOCAL, doubtful, ambiguous ; a term applied to a chord composed of equal intervals either major or minor thirds, which divide the octave into equal parts ; as, the chords of the diminished seventh, and the superfluous fifth. (See CHORDS.)

They are called equivocal, on account of the enharmonic changes to which they are liable.

ESPRESSIONE, } (Ital.) with expression
CON ESPRESSIONE, } and effect.

ESPRESSIVO, (Ital.) expressive.

ESSENTIAL NOTES. In flowing melodies, we have two species of notes, essential and accidental; the former are those which determine the nature of the accompanying harmony, and the latter are mere ornaments which immediately precede or follow, by conjoint degrees, the essential notes, and are not reckoned in the harmony. By examining a melodious air, we shall find that the several essential notes which succeed each other in a measure or part of a measure and sometimes in more than one measure, belong to one chord. (See HARMONIC FIGURE, p. 149.)

EUHARMONIC, (Gr. *eu* good, and harmony,) perfectly harmonious.

EUPHONY, (Gr. *eu*, good, and *phonos*, sound,) sweetness and smoothness of sound.

EVITATED, (Fr. *evite*,) avoided. (See CADENCE.)

EXECUTION, *particularly*, a facility of voice or finger in running rapid divisions, and performing accurately difficult passages: *generally*, all the higher requisites of a fine performance, just intonation, taste, grace, feeling, expression, &c. All the talents and acquirements of a complete performer are necessary to render execution perfect. In addition to the endowments of nature, the performer should know from study when and how to make the accentuation and connexion of the notes. (See EXPRESSION.)

EXERCISES, a species of composition designed for the improvement of the student. Exercises should be of such a melodious character, as to interest as

well as to instruct; unless interest can be excited, little improvement will be made.

EXPLOSIVE TONE, is made by filling the chest with air, and suddenly forcing it out, thus producing an abrupt and passionate sound This power is not easily acquired, hence when at command, it surprises us by its effects. Nothing tends more to give power and flexibility to the voice, than exercises on the explosive tones. The syllable *ah* is best adapted for this purpose. (See FORZANDO & DYNAMICS.)

EXPRESSION, giving to music that force and feeling which the sentiment requires. Music has expression when it describes and excites the emotions of the mind. Judicious expression is the soul of music, and can only be the result of natural feeling combined with a refined taste. A performer without sensibility, though in other respects an accurate musician, may with propriety be compared to a marble statue, the symmetrical proportions of which please the eye, but, wanting in animation, compel us, tired of its vanity, to turn away after a while, to the contemplation of some less beautiful object. Expressive music awakens all the finer feelings of our nature, enchains the soul, and makes the passions yield to her subduing sway. It is not mere rhythm or melody which effects all this, but it is the power of expression that enlivens the whole. In every society, music is a welcome guest. In the domestic circle, her bewitching charms smooth the brow of care; and, while listening to her strains, the toils and anxieties of the day are forgotten. Congenial with all the social feelings, she banishes ruder pleasures from her presence. While listening to expressive airs, a delicious tenderness creeps through our veins; the world, cleared of its grosser passions, seems a paradise of bliss, and devotion receives an additional

fervor from her spell. But, unaided by expression, music would not produce these exquisite sensations, would not gain complete possession of the heart. Writers have attempted with great ingenuity to lay down rules for the varieties of expression; but whoever undertakes to follow rules in giving expression, presents us with a mere skeleton without life and animation. Every appearance of effort disgusts us. As in the other fine arts, so in music, there is but one step between the sublime and the ridiculous. True expression clothes her song in characteristic display of grace, majesty, and pathos; not a single note will be breathed in vain. She wisely considers that ornaments should ever be subordinate to the sentiment, and that the grand end of the composition is to speak to the judgment as well as the hearing. The most common mistake with composers and church choirs, is, in attempting to express words and not ideas. There is no error into which they so aptly fall, as in attempting to express such words as *high* and *low*, *up* and *down*, &c. Singing the word *small* with such softness as scarcely to be heard, or exerting all the power of the lungs on the word *large*, is punning, not expression; trifling with the words and neglecting the sentiment. Instead of considering how this or that word should be executed, the first object should be, to study the true meaning and character of the subject, so that effect may not only be given to a word here and a word there, but the sense of the whole sentence expressed, so as to be understood and felt. It is true, the expression of the whole is conveyed by appropriate emphasis on particular words, but it is not simply the words which demand emphasis, but their connexion with the sentence. For instance, in the phrase, '*I have a silent sorrow here*,' the word '*silent*' is not to be sung soft and

plaintive from its intrinsic meaning, but from its connexion with the word '*sorrow.*' The same music is capable of expressing different and even opposite emotions, as joy and grief; they each have a similar effect on the nerves, though the former excites pleasurable and the latter unpleasant sensations; producing tears of joy and tears of grief. Very different emotions will arise from performing the same piece in *staccato* or *legato.*

This leads us to speak of a very common fault of our singing masters. Most teachers have a style of performance peculiar to themselves, to which every tune whatever is its character must conform. Thus the character of music must be made subservient to ostentatious display. Perhaps in no one thing do singers fail so much as in attempting to describe and excite devotional feeling. Religious feeling partakes neither of the lachrymose nor the amorous. It is full of dignified and placid joy, of which the gentle swelling on the emphatic words gives the most appropriate idea. False expression is worse than no expression at all; it renders the most pathetic airs ludicrous. It is a singular fact, that many who are guided by good sense in reading, the instant they begin to sing, seem to lose all idea that the poet is of any consideration. Their expression is merely an attempt at display, or a criminal indifference.

Though rules for expression are an absurdity, yet some general directions are necessary as a guide, and to prevent affectation or over action. There is expression in composition as well as in execution; and it is from their concurrence, that the greatest effect is produced. To give expression to his works, the composer must understand the connexion between the sentiment to be conveyed, and the powers of music. He ought to know and to feel the effect of

the different combinations, in order to convey to the sentiment he has chosen, a character suitable to it. First, he should carefully seek what he would express; and then, how he can express it. The melody, harmony, movement, choice of instruments and voices, are the materials of musical expression. The *melody*, by its immediate connexion with accent and emphasis, is that which, particularly in figurative music, gives character to all the rest. From the air, both in vocal and instrumental music, the principal expression should be drawn; and the design of the accompanying parts should be made to subserve this object, not to display themselves. Wherefore, the composer must first seek the kind of melody most suitable to the sentiment, always making the expression of the words subservient to that of the thoughts, and both to the circumstances and feelings of the performers and hearers: for when we are deeply affected, every sentiment we express or feel, takes a tint from the feelings which reign within us. Not only is a suitable melody requisite, but the *movement* must correspond to the different feelings which the words are calculated to inspire, including all the varieties of loud and soft, quick and slow, abrupt and sustained, and the explosive and gentle swell and dying away. (See PIA and FORTE, ALLEGRO and ADAGIO, STACCATO and LEGATO, FORZANDO and CRESCENDO and DIMINUENDO, &c.) Many terms are prefixed by composers to the several strains as directions for the performer. These terms are usually Italian, such as *Andante*, *Affetuoso*, &c., which are explained in their proper places. In following such directions, there is danger in attempting to express what the performer does not actually feel; in such a case, the effect will often be ludicrous; and at best can but astonish us with the art and dexterity manifested.

In true expression, the composer and performer are lost sight of; the attention is riveted and the feelings are enraptured in view of the sentiment. Directions then are of no farther use than as a guide to the sentiment. The *harmony* and the accompanying parts must be such as to aid the expression, not to divert the attention. Only in a cultivated state of the taste, are the pleasures of harmony appreciated. Among the rude and uncultivated, the simple ballad has its principal charms. Load the same with harmony, and their unaccustomed ears become distracted. Not so with the cultivated; they are able to comprehend the harmony, and perceive new beauties from the air's enchaining itself with the progressive chords, and thus exhibiting new relations, not so easily comprehended by the uninitiated. There is little danger of overloading the harmony, so long as its character is subordinate, and unity of design is kept up. In choral music, the harmony cannot be made too full. There is something grand and subduing in the harmonious progression of full chords, which brings a calm over the soul, and puts it into a devotional frame. (See PSALMODY.)

In the *choice* of *instruments*, much discretion is required; and also in the adaptation of the music to the different instruments. In instrumental music, the powers of the instruments must be known, and in the execution, skill is required to develope those powers, and throw the performer into the back ground. In vocal music, not only the instrumental performer, but the instrument itself should not arrest the attention. (See ACCOMPANIST.) The *voices* should be adapted to the parts they have to perform, so that there may be no straining, or apparent effort. Only flexible female voices should be placed on the air, and the low heavy voices on the base; the base in

chorus music should have few divided notes, and the harmony sufficiently open to allow it a free motion in large intervals when necessary. The intermediate parts need few voices, but these must be natural and sure. (See SINGING.) In conclusion we shall simply add, that expression can never be attained by imitating others, though this may be valuable in attaining a correct tone and execution, but by an intimate and hearty acquaintance with the subject, and a knowledge of the powers of the voices or instruments.

EXPRESSIVO, with expression. (See ESPRESSIVO.)

EXTEMPORE, (Lat. at the moment,) without premeditation; applied to a performance unwritten, unstudied, and consisting merely of the effusions of fancy. To play extempore, requires, besides a ready execution, acquaintance with harmony and modulation.

EXTENSION OF THE SCALE, an elementary term to indicate that the notes pass beyond the compass of a single octave.

EXTENT, the compass of a voice or instrument; that is, the distance between its highest and lowest sound. (See COMPASS.)

EXTRANEOUS, remote; applied to abrupt unnatural modulations, into keys which are not related; (see REMOTE;) and also to the accidentals which lead to those keys.

EXTRAVAGANZA, a wild, capricious, and irregular composition.

EXTREME, those intervals are called extreme which are extended or contracted as much as possible: as, the extreme sharp sixth, the extreme flat seventh, &c. (See SUPERFLUOUS and DIMINISHED.)

EXTREME PARTS, are those which are at the greatest distance from each other, in point of compass.

F.

F. The fourth note of the natural scale, called *fa* by the French and Italians.

F CLEF, the base clef. (See CLEF.)

FAGOTTO, (Ital.) the bassoon.

FALLING OF THE HAND, the downward beat. (See BEATING TIME.)

FALSE, incorrect or imperfect, opposed to perfect.

FALSE CADENCE. (See CADENCE 3.)

FALSE CHORD. (See CHORDS BY ALTERATION.)

FALSE EAR; the ear is false, when, in singing out of tune, false intonations are not distinguished from true.

FALSE FIFTH, the imperfect or flat fifth.

FALSE INTERVAL, a perfect interval increased or diminished a semitone; as, a *false fifth*, which is a semitone less than a perfect fifth.

FALSE INTONATION, arises when the performer does not truly express the intended intervals, but gives them too flat or too sharp a sound. The fault lies chiefly though not exclusively in the ear, for some persons who sing out of tune, readily detect faults in others; it must arise then from neglect or want of proper cultivation. The principal cause of singing out of tune, arises from forcing the voice beyond its natural tone. (See INTONATION.)

FALSE RELATION. (See RELATION.)

FALSET, } (Ital.) the upper unnatural tones
FALSETTO, } of the voice, more particularly applied to a man's voice. (See VOICE.)

FANDANGO, a lively air, in 3 : 4 time, resembling the English hornpipe; a favorite Spanish dance.

FANFARE, a military air of a lively character, performed by trumpets and other wind instruments.

FANTASIA, (Ital. fancy,) a species of music in which the composer's imagination is supposed to be unrestricted by the severe laws of composition. The word is sometimes used exclusively to signify an extempore performance. A *fantasia* must present something original, some elevated ideas, some extraneous yet pleasing modulations. The man of genius, the great extempore player alone, should indulge in this species of composition; and he must replace, by his invention and science, whatever is wanting in point of regularity in the piece.

FARCE, a comedy interspersed with vocal and instrumental music.

FASTOSO, (Ital.) pompous, elevated.

FAVORITO, (Ital.) favorite, well chosen.

FEEDERS, a technical term denoting those appendages to the bellows of an organ, whereby the wind chest is supplied with a proper quantity of air.

FEIGNED, artificial. (See FALSET.)

FEINT, false, applied to sharped or flatted intervals.

FERMATA, (Ital. *fermare*, to stop,) a pause 𝄐 on a note denoting a suspension of a melodic phrase.

FEROCE, (Ital.) in a furious style.

FIDDLE, (ancient English *fithele*,) a common name for violin. (See VIOLIN.)

FIDDLE STICK, a vulgar term for bow.

FIDDLER, one who practises the violin.

FIERAMENTE, (Ital. fiercely,) proudly, passionately, in a bold energetic style. (*not used.*)

FIFE, a wind instrument, used in military bands,

to accompany the drum; its tones are very shrill. It usually has no keys, and is consequently a very imperfect instrument. It is commonly pitched on C in unison with the octave C flute, and has the same fingering. Music for the fife has no great compass, and is strongly marked with rhythmical accent.

FIFER, a performer on the fife. A fifer's chief difficulty is to get and keep his instrument in tune; as it consists of but one tube, the only method of tuning, is by moving the cork. (See TUNING.)

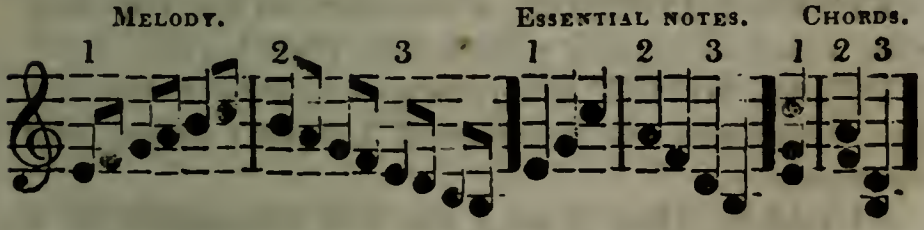
FIFTEENTH, the double octave. (See INTERVAL and ORGAN.)

FIFTH. (See INTERVAL and CHORD.)

FIGURATIVE, florid, ornamented; a term applied to music with divided notes, in opposition to plain choral music. (See FIGURATIVE HARMONY.) *Melody* is *figurative*, when instead of moving regularly note by note with a base, it is ornamented with divided and altered notes.

FIGURE, a general name for every sign used in music to denote sound. (See NOTES.)

HARMONIC FIGURE, a term applied to the successive essential notes of a melody which belong to the same chord. Ex.



In separating the essential from the accidental notes, and in harmonizing a given air, we are guided by the *harmonic figures*. (See HARMONIOUS NOTES.)

FIGURE OF NOTES, is a term sometimes applied to a set of notes which form a musical sentence, less marked than a phrase, which is itself composed of figures.

To FIGURE A BASE, to write figures or other characters over or under a base to indicate the accompanying chords. The characters now in use for this purpose are, the figures 1, 2, 3, 4, 5, 6, 7, 8, and 9; and also 10, 11, 12, &c. to indicate suspensions in the upper parts. An altered note has the sign of alteration expressed thus, ♭7, ♯6, ♮5, &c.; or by a dash drawn through the figure, thus, 6̸ is ♯6, 5̸ ♭5, &c.; the latter characters are but little used, as writers are not agreed in their meaning; some consider them all sharped intervals, while others regard some of them as flatted: an altered third is expressed simply by the mark of alteration, ♯, ♭, ♮. When a note is suspended or carried into the next chord, it may be expressed by a horizontal line or dash; thus, 6 — —. A base when thus marked is called a,

FIGURED BASE, a base with the harmony indicated. Originally, points only were used for this purpose; from whence comes the word counterpoint, or point under point. Figures were first used in the seventeenth century. The term *figured base* is now used in distinction from fundamental base, to denote the base of figurative and inverted harmony. (See *Figured* BASE.)

FINAL CADENCE, a cadence on the key note with which all regular pieces end. (See CADENCE 1.)

FINAL NOTE, the principal note of a mode or key, commonly the last note of a piece; called also the tonic.

FINALE, (Ital. final,) the last movement of a composition; also, the last piece performed at each part of a concert.

FINE, } (Ital.) the end; a term generally used at
FIN, } the end of the first strain which is repeated *da capo*, and closes the tune.

FINGER, a metaphorical term applied to ability

in execution, especially on keyed instruments; as, that performer displays a rapid and delicate *finger*.

FINGER BOARD, a piece of black ebony or hard wood placed over the neck of a violin or violincello, and extending over the sound board, upon which the strings are pressed by the fingers of the left hand, while the right hand draws the bow across them. This word is also applied to the keys of the piano forte or organ.

FINGERING, disposing of the fingers in a convenient and natural manner, in performing on any instrument, more particularly on the organ and piano forte. (See PIANO FORTE.)

FINISHED, accomplished, an epithet applied to musical practitioners, whose performance is superlatively excellent.

FINITO, (Ital.) finished or ended, applied to canons.

FINTO, (Ital.) deceptive; applied to an unexpected interruption of a final cadence.

FIRST, a word applied to the upper part either vocal or instrumental, because it is usually the air or leading part. In choir music, it should always be performed by female voices.

FIRST STRING, the smallest or shortest string which gives the highest note.

FISTULA, (Lat.) an epithet applied to all instruments derived from the pipe or reed. *(not used.)*

FITHELE, (Lat. *fidicula*,) the old English appellation of the fiddle.

FLAGEOLET, a wind instrument consisting of a small pipe blown at the end like a whistle, the tones of which are sweet, shrill, and clear. It is an instrument of but little power, hence it is used chiefly as a solo instrument. It forms a good accompani-

ment for the voice. Its scale is nearly the same as that of a D flute. (See WIND INSTRUMENTS.)

DOUBLE FLAGEOLET, the same as the above with an additional tube whose upper holes correspond with the lower holes of the principal tube, with an additional lower one. The additional tube is played with the right hand, and the notes form a second part to such notes as can be played on the principal tube with the four fingers of the left hand. Music for two parts must consequently be of but little compass, and on its natural or nearest related scale. When the principal notes are such as to require the aid of the right hand, or of such an extent as cannot be accompanied by the second tube, the latter is closed by a slide which cuts off the air.

FLAT, the sign for lowering a note half a tone. (See CHARACTERS Ex. 22.) Thet erm is sometimes used instead of minor; as, a *flat third*, for a minor third.

FLAT SEVENTH, the minor seventh above the dominant, or above the tonic when the latter is used as a dominant to the relative key on the subdominant.

To FLAT, } to lower a note half a tone, or
To FLATTEN, } two half tones when the flat is double.

FLAUTANDO, (Ital.) written over music for instruments played by the bow, denotes in imitation of the sounds of a flute.

FLAUTINO, (Ital. dimin.) a small or octave flute.

FLAUTO, (Ital.) flute. (See FLUTE.)

FLAUTO PICCOLO, (Ital. *piccolo*, little,) a little or octave flute.

FLAUTO TRAVERSO, (Ital. *traverso*, turned across,) a German or side flute.

FLEBILE, (Ital. sad,) in a style expressive of anguish; soft and doleful.

FLEXIBLE; a voice is said to be flexible, when it can swell and diminish its tones with such smoothness and power, as to give every shade of expression to the melody it executes whether simple or ornamented.

FLORID, ornamented, highly figurative; applied to fanciful and embellished compositions.

FLORID COUNTERPOINT, consists of a great number of divided notes and ornaments, so arranged among the different parts of the composition, that each group of melodic passages is heard alone and successively, something in the dialogue style. The principal difficulty consists in so arranging the different parts, as not to destroy the effect of each other.

FLOURISH, a kind of military air generally short and pleasing, which is performed by trumpets, and imitated by other wind instruments. It is generally made with two trebles of trumpets, accompanied by kettle drums.

Flourish is also a term applied to the ornaments which a performer adds to his part in the execution. (See ORNAMENTAL NOTES.)

FLUGEL, the harpsichord.

FLUTE, a wind instrument, blown with the breath, consisting of a tube furnished with holes in the side for the purpose of varying its sounds. It is the most simple of all wind instruments; and its antiquity may be referred to a period even prior to the Greeks and Romans. Rude as it was in those ages, it ranked next to the lyre. The name is derived from *flutta*, the Latin name for lamprey, a sort of eel taken in the Sicilian seas; because it resembles it not only in figure, but also in the number and distance of its holes, similar to those observed in the sides of that fish.

Several species of flutes have been named from

their forms or from the materials of which they were made: thus, the *avena* was merely an oaten straw; the *calamus*, hollow reeds of different lengths cemented together side by side, (see PANDEAN PIPES.) These simple instruments preceded the invention of those holes in the side, by means of which a single pipe gives several sounds. The *tibia* was a flute originally formed from a bone so called in the leg of an animal. In fact, wind instruments in general were, for a long time, composed of materials hollowed by nature; but, when the art of forming artificial tubes was discovered, the process was adopted for flutes. They were made of box, laurel, ivory, copper, silver, and even of gold. Since the invention of the flute, it has undergone a number of changes, both in form and name. There are three different kinds of flutes now in use; viz. the English flute, the German flute, and the octave flute.

ENGLISH FLUTE, } consists of a tube about 18 inch-
FLUTE A BEC, } es in length, with eight holes disposed along the side; by the stopping and opening of which by the fingers, and by varying the force of the blast, the sounds are varied and regulated. It is blown at the end like a common whistle, and played lengthwise. It is now seldom used, except as a child's toy; but has given way to the,

GERMAN FLUTE, which is played sidewise. The introduction of this side flute was a great improvement. It consists of a tube formed of several joints or pieces screwed into each other, with holes disposed along the side. It is stopped at the upper end by a moveable cork, and blown at a hole about two and a half inches from the upper end. At first, it had but one key, and aspired to no greater extent of notes than the female voice; but these were full and delicious. In this simple form, it is often found in

the hands of laboring youth, who, after their toils, spend a vacant hour, in playing artless melodies; which not only furnishes them with innocent amusement, but keeps them out of circumstances of temptation. The sounds of the distant flute are grateful in a pleasant summer's eve. Its natural scale is D, and its compass is from D below the treble staff, to A in altissimo. Since the flute has been introduced into the orchestra, its character has changed. In order to produce the chromatic intervals, keys have been introduced between the holes, by which the flats and sharps may be intonated. Two long keys reaching below, serve to extend the compass down to middle C; and in the hands of a skilful player, it may be made to ascend to C in altissimo. The keyed flute commands every key of the scale. It is now called on to play the highest and most conspicuous notes in the orchestra; and has hence become a prominent instrument. In concerts, its natural and principal office is to sweeten and incorporate the highest parts of the harmony, with its shrill and sustained notes. Being elevated so high in the sphere of sounds, so much above the other instruments, it is completely unmolested, and free from the checks which are incident to those that are placed in a lower station in the band. Hence, it is a dangerous instrument to place in the hands of an unskilful musician: as the least deviation in time or tune renders it intolerable to the ear. As an accompaniment for the voice, it holds a high rank; but, as it is easy to display its powers, instead of being subordinate, it often improperly seeks the first place in the attenion of the audience. (For its scale and the manner of playing, see WIND INSTRUMENTS.) In a band, a C flute is often used; in such a case, the notes are played one tone above the place where they are set.

OCTAVE FLUTE, the same as the German flute, except that the notes are an octave higher. It has a very shrill sound, and is only calculated for compositions of a noisy character. Its proper place is in a band; for this purpose it is pitched on C.

DOUBLE FLUTE, a flute with two tubes.

TENOR FLUTE, a flute with a low pitch.

FLUTED, a term applied to the upper notes of a treble voice, which from the constrained manner with which they are produced, are thin and of a flute-like tone.

FLUTIST, a performer on the flute or a professor.

FOCOSO, } (Ital. *foco*, fire,) with spirit and
CON FOCO, } energy.

FOLLIA, variations on a given air; invented by the Spanish.

FOLLOWING. (See CONSECUTIVE.)

FONDAMENTO, (Ital. the foundation,) thorough base.

FOOT, a portion of melody with one accent, usually forming the value of one measure.

FORCE, the quality of sound by which it is rendered more sensible and heard at a greater distance. The quickness of vibrations distinguishes the pitch; but their intensity, the loudness or force. (See DYNAMIC DESIGNATIONS.)

TO FORCE THE VOICE, to exceed its natural strength and tone. A forced tone is seldom a true tone.

FORTE, (Ital. strong,) loud and sustained. The sound should be forced, but not so as to raise the pitch. (See DYNAMIC DESIGNATIONS.)

FORTE PIANO. (See PIANO FORTE.)

FORTEMENTE, (Ital.) loudly. *(little used.)*

FORTISSIMO, (Ital. superl.) very loud and full. (See DYNAMIC DESIGNATIONS.)

FORZANDO, } (Ital. *forzare*, to force,) a term
FORZATO, } applied to a single note which is to be struck with a loud explosive tone of voice, and suddenly diminished into a soft and continued sound. It often falls on the unaccented part of the measure. (See DYNAMIC DESIGNATIONS.)

FOURTEENTH, the octave of the seventh.

FOURTH. (See INTERVAL and CHORD.)

FOURTH STRING, the lowest string of a violin and violincello.

FREE, in opposition to fixed, as a fugue.

FRENCH HORN. (See HORN.)

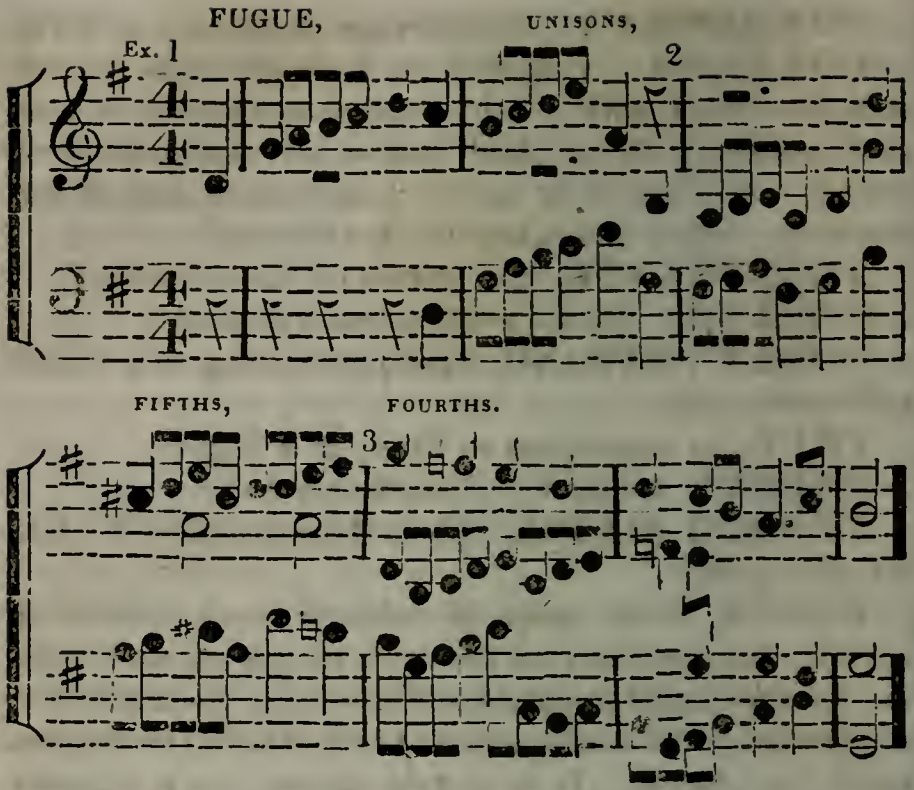
FRENCH SIXTH. (See CHORDS, 35 & Ex. 21, Fr. p. 82)

FRETS, small strips of brass or ivory, placed at certain distances across the neck of guitars and similar stringed instruments such as viols, to mark the semitones of the scale, and to show where the fingers must be placed. It is a bad devise, as it renders most of the tones incorrect.

FRONT ORGAN, ornamented ranks of pipes placed in front of an organ, supplied with air by means of conducters from the wind box: sometimes they are merely ornamental.

FUGA, (Ital. a chase,) a fugue. (See FUGUE.)

FUGATA, (Ital.) in the style of a fugue.

FUGE, } (Lat. *fuga*, flight,) a composition in
FUGUE, } which the parts set off successively, and seem to fly and pursue each other; the leading part takes up a given subject, which is successively repeated or imitated by the other parts, and heard at different periods and in the different parts throughout the piece; the repetition may be made in unisons or octaves, Ex. 1; or in one of the relative keys, that is, a fifth or fourth above or below, Ex. 2 and 3.

These examples merely show how fugues commence and proceed; in practice, they are more extended, and have more unity.

Fugues in general render the music more noisy than agreeable; for which reason, they are the most suitable for choruses. As their chief object is to fix the ear on the principal air or subject, which passes incessantly from part to part, the composer should be particularly careful to render this air always very distinct; which may be done, by giving long notes or little melody to the other parts, or by separating and arranging the harmony so as to prevent the other parts interfering or becoming confounded with it. The fugue should be so designed, that the answer may appear before the end of the subject, and follow it in the same direction in close imitation, that is, with the principal intervals alike, and in the same or the relative keys. This is necessary, in order to pre-

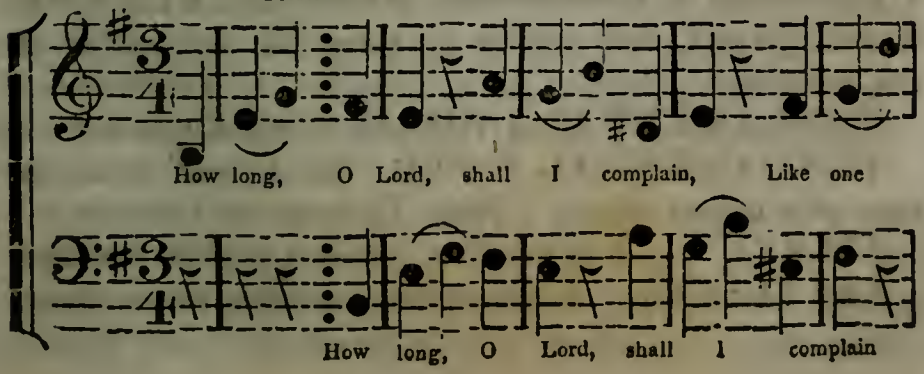
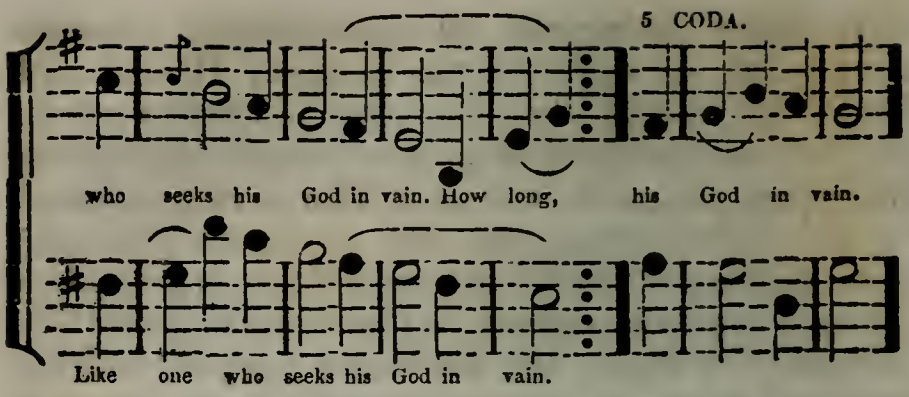
serve unity throughout the composition. Fugues were much in vogue in the times of Handel and Bach; but though they are used in modern music, yet they are not confined to the ancient mechanical rules, nor so much extended in a strictly imitative form. When introduced and conducted with good taste, and not too much prolonged, they have a good effect in repetitious music. There are various kinds of fugue, the *simple*, the *double*, the *contrary* and the *perpetual* fugue, which serve more to display the skill of the composer, than to please the ear of the audience.

Simple Fugue, contains but one subject, and is the least elaborate in construction, and the easiest in execution.

Double Fugue, is made, when, in the course of one already announced, another of a design totally different from the first, immediately follows; which must also have its answers, &c., as well as the first.

Contrary or counter Fugue, a fugue in which the answer is made by a motion contrary to that of the subject.

Perpetual Fugue, is one in which the several parts successively take up precisely the same air, and continue it through; and then successively commence anew and repeat the same air, Ex. 4, or close with a coda, Ex. 5.

Ex. 4 PERPETUAL FUGUE or CANON.

The notes under the slur are omitted when the *coda* is sung.

FUGHETTA, a short unelaborate fugue.

FULL, complete, loud and sustained.

FULL ANTHEM, an anthem in which all the voices are continued through the piece.

FULL CHORUS, a chorus in which all the voices are employed, accompaned with a full orchestra.

FULL HARMONY, harmony with complete chords.

FULL ORGAN, the organ played with all the ordinary stops out.

FULL SCORE, a score in which the parts are full or make complete chords.

FULL TONE, a tone round, clear and sustained.

FUNDAMENTAL, (l.at. *fundamentum*, the foundation,) the principal, the lowest.

FUNDAMENTAL BASE, a base consisting of a succession of fundamental notes; (see BASE.) It is not played, but serves to show the legitimacy of the harmony.

FUNDAMENTAL CHORD. (See CHORD.)

FUNDAMENTAL NOTE, the lowest note or root of a direct chord. (See THEORY OF CHORDS.)

FUOCO, } (Ital. fire, passion,) with fire and
CON FUOCO, } vehemence; a brilliant execution.

FURIOSO, } (Ital. *furia*, rage,) a loud, quick
CON FURIA, } and agitated movement, indicating fury and wildness.

FURNITURE, an organ stop with mixed notes, sometimes called *mixture*. (See ORGAN.)

G.

G. The fifth note of the natural scale, which the French and Italians name *sol*.

G CLEF, the highest of the musical clefs. (See CLEF.)

G GAMUT, the lowest line on the base staff.

GAIEMENT, (Fr.) in a lively style; gaily, cheerfully; every note lightly and smoothly expressed.

GAILLARDE, (Fr.) a lively dance in 3:4 time, formerly called romanesque. *(little used.)*

GAMBA, (Ital. leg,) a species of viol. (See VIOL DA GAMBA.)

GAMUT, (Gr. *gamma*, the Greek name of the letter G, and *ut*,) an old expression for scale; and to learn the names and situations of its different notes, is to learn the *Gamut*. The name was first given to the scale by Guido Aretinus, a monk of Tuscany, about the year 960. Having added a note below the lowest note of the ancients, he adopted, for its sign, the Greek letter *Gamma;* hence the word *gamut*. (See SOLMIZATION.)

GAVOT, } a species of air in common time,
GAVOTTA, } suitable for dancing, much in vogue in Handel's time; consisting of two lively strains, the first comprising four or eight measures,

and the second eight or twelve. The movement of the gavot is generally pleasing, oftener lively, but sometimes tender and slow.

GENERA, (Lat. plural of *genus*,) the different scales by which the Greeks regulated their division of the tetrachord. Their genera were three, the *enharmonic*, *chromatic*, and *diatonic*; the two last of which and sometimes the first, were variously subdivided into species, which were also called the *chroai*, or colors of the *genera*. Besides these divisions, there was a common genus, consisting only of the fixed sounds of the genera; as also a mixed genus, partaking of two or all three of the genera. These genera were not the same as the modern diatonic, chromatic, and enharmonic scales; indeed, the whole musical system of the ancients, being conveyed to us by speculative authors, and not by examples, it is impossible to get at an accurate meaning of these terms.

GENERATING SOUND, the natural or lowest sound of any sonorous body, whose sounds are accompanied with the harmonic sounds, the 8th, 12th, 15th, &c.; as the sound of a church bell. (See Sound.)

GENERATOR, the instrument which gives the lowest sound of a natural chord; as a monochord, (which see.)

GENEROSO, (Ital.) expressive of noble feeling.

GENIUS, the power of originating new ideas. To compose good music, requires not only genius, but good taste, and a knowledge of the principles of music, the laws of harmony and progression.

GENUS, (Lat.) the ancient term for the division and disposition of the tetrachord, considered in relation to the intervals of the four sounds which compose it; the fourth being the foundation of their scale,

what they called the *genera* or kinds, arose from its various divisions.

GERMAN FLUTE. (See FLUTE.)

GERMAN SIXTH, extreme sharp sixth when accompanied by a fifth, because the German composers frequently use this chord. (See CHORDS, p. 91.)

GIGG, GIGA, (Ital.) and GIGUE, (Fr.) a jig. (See JIG.)

GIOCOSO, (Ital. merry,) sprightly, joyous.

GIUSTO, (Ital.) just, exact; as *tempo giusto*, exact precise time.

To GIVE OUT THE TUNE, to perform on the instrument the tune once over, according to full but strict harmony, for the purpose of enabling the choir or congregation to join, in a tuneful manner, in the singing.

GLEE, a vocal composition for three or four voices, generally of a light, secular, and fugueing character. The glee is of modern invention, and appears to have been of English origin. Originally it was confined to themes of cheerfulness and conviviality, but subsequently was applied to subjects either gay, tender, or grave. It became the taste of England about 1770, and formed a prominent part of the concerts of the nobility. About this period, the art of glee writing was much encouraged by the London Catch Club, in which the royal dukes and some of the first nobility joined in giving, every year, a gold medal for the best comic and serious glee. This raised an emulous spirit among English composers, and produced the admirable pieces of Cooke, Paxton, and particularly of Webbe, who, during his career, gained every prize that was offered. The expression given to the glees, gave them a superiority over the madrigals of a former age. The united voices of Harrison, Knyvett, and Bartleman, contributed to

to keep alive the taste for glees, for more than twenty years. The pleasure derived, perhaps, was more from the sensual gratification of tone on the ear, than a display of skill and good taste. While glees were so popular in England, Germany, though in the midst of war, was making the most rapid strides in the music of instruments. On the return of peace, the important works of Haydn and Mozart were introduced, which gave a new turn to musical taste; and the glees were allowed to subside. (See HISTORY OF MUSIC.)

To GLIDE, to pass smoothly and imperceptibly from note to note, with a soft flowing execution.

GLOTTIS, (see VOICE.) The term was used by the ancients to signify a tongue or mouth piece, by which their wind instruments were intonated.

GONDOLIERS, (Ital. *gondola*, a Venitian boat,) Italian bards. (See BARCORELLES.)

GONG, a Chinese instrument of percussion, of a most extraordinary vibration. It is made of a mixture of copper, silver, and lead, in the shape of a sieve. Its tone, which scarcely consists of any note the ear can appreciate, is loud, harsh, and clanging. It is used only to give a national cast to music, or to awaken surprise, and rouse the attention of the auditors; in a funeral march, however, it has a good effect.

GRACES,
GRACE NOTES, } (See ORNAMENTAL NOTES.)

GRADES OF TIME, the different varieties of movement. The five principal grades from slow to fast, are Largo, Adagio, Andante, Allegro, and Presto. (See MOVEMENT.)

GRADO, (Ital. a step,) a degree; as, *di grado*, by conjoint degrees, in opposition to a leap.

GRADUAL, } a verse sung after the epistle,
GRADUALE, } in Catholic churches.

GRANDE, } great, synonymous with full, and
GRAND, } prefixed to other words; as, grand chorus, grand orchestra, &c., denoting that all the parts are full and complete, composed and arranged in a masterly manner.

GRAVE, opposed to acute; low, deep; the slower the vibrations of the sonorous body the more grave the tone. (See Sound.)

GRAVE, (Ital. heavy, serious,) the slowest movement in music, denoting also gravity and deep and awful solemnity.

GRAVEMENTE, (Ital.) seriously. (See Grave.)

GRAZIOSO, } (Ital. *grazia*, grace, elegance,)
Con GRAZIA, } in a smooth, flowing, and graceful style; with sweetness of touch and expression.

GREAT SIXTH, the chord of the perfect fifth and major sixth. (See Chords, E[1] p. 79.)

GREGORIAN CHANT, (See Chant II,) choral music according to the eight celebrated church modes, as compiled and arranged by pope Gregory.

GROPPO, (Ital. a knot,) a group. (See Group.)

GROS-FA, ancient church music written in square notes and semibreves.

GROUND BASE, (see *Fundamental* Base;) a base continually repeated to a varied melody.

GROUP, a collection of quavers or other short timed notes, connected together by ties; see Ex. 16 and 18 p. 11, &c.

GRUPPO, GRUPPETTO, (Ital.) a group. (See Ornamental notes.)

GUIDA, (Ital. a guide,) the leading voice or instrument in fugues, which announces the subject.

GUIDE, (see Guida.) Guide is also applied to certain characters placed at certain distances upon

canons written on one staff, to show at what time each voice takes up the subject; see Ex. p. 58, 1, 2, 3, 4.

GUIDON, (Fr.) a direct; see Ex. 35, p. 71.

GUIDONIAN HAND. (See HARMONIC HAND.)

GUITAR, (Spanish, *guitarra;* Lat. *cithara*, a lute or harp,) a stringed instrument, somewhat larger than the violin, of an oval form, with a neck marked with frets. It has six strings, which are tuned to E third space base staff, A, D, G, B, E. In playing, the left hand presses the strings down on the proper frets, while the right strikes or agitates the strings. It is used chiefly as a solo instrument.

The Spaniards, the reputed inventors of the instrument, are so fond of music, particularly of the guitar, that there are few, even of the laboring classes, who do not solace themselves with its practice. There is scarcely an artificer in any of the cities or principal towns, who, when his work is over, does not entertain himself and his friends with his guitar. It is the instrument which the Spanish gentlemen use in their serenades. The Spanish guitar is a delicate instrument, and has lately become fashionable in England.

GUSTOSO, } (Ital. *gusto*, taste,) with taste, in
CON GUSTO, } an elegant and finished style.

GUTTURAL, an epithet applied to those tones which are formed in the throat. (See VOICE.)

H.

H. The Germans designate B natural by this letter; and by B, they denote B flat.

HALF BEAT. (See ORNAMENTAL NOTES.)

HALF CADENCE, an imperfect cadence.

HALF DEMISEMIQUAVER, a sixty-fourth, see Ex. 11, p. 67.

HALF NOTE, a minim, see Ex. 6, p. 67; called a half note, because it equals half a semibreve or whole note.

HALF SHIFT, a term used by violin players to denote that the hand is moved up a short distance on the neck of the instrument, so as to reach some rather high notes.

HALF TIME, two-four time; so called, because its measure note is a half.

HALF TONE, a semitone.

HALLELUJAH, a Hebrew term signifying 'Praise ye the Lord:' a part of church music in which these words are repeated. The singing of Hallelújahs was considered a sort of invitation to praise the Lord.

HALLELUJAH CHORUS, a grand chorus in which the word 'hallelujah' chiefly is used.

HAMMER (See PIANO FORTE.)

HARDIMENT, vivace; with life and spirit.

HARMONIC FIGURE, the successive essential notes of a melody, which belong to one chord. (See ESSENTIAL NOTES.)

HARMONIC HAND, a method invented by Guido, for teaching musical notes and their derivations, by means of the seven letters, G, A, B, C, D, E, F; by repeating which, on the different joints of the fingers of the left hand, twenty musical signs or notes were formed.

HARMONIC PROGRESSION. (See HARMONY, I, *Second*, p. 172.)

HARMONIC SOUNDS, sounds produced by a string, when the impulse given to it is sufficient only to make a part of the string vibrate. (See EOLIAN HARP.) Similar sounds may be produced on a violin or violincello, by gently touching the string at some natural division, and drawing the bow near the bridge. (See STRING.)

HARMONIC TRIAD, the common chord. (See TRIAD, & CHORDS A, and B.)

HARMONICA, musical glasses so named from the purity of the sounds. Very sweet music may be made on tumblers or other glasses, diatonically tuned by partly filling them with water; the sound is elicited by a gentle friction with the moistened fingers; by means of machinery made for the purpose, a delicate musical instrument may be thus constructed. A more simple harmonica may be formed, by suspending within the lid of a box, on strips of tape or other flat string, pieces of glass diatonically tuned by cutting them of a suitable size. The glasses are struck with pieces of cork attached at right angles to the ends of pieces of whalebone. The glasses can be tuned only by experiment; as the thickness, the density, &c. necessarily vary. The pitch is raised by trimming, or cutting off from the sides and ends.

HARMONICS, the science which treats of musical sounds; including the mathematical divisions of strings and pipes, the harmonic proportions, the theory of vibrations, &c. (See Art. 'Sound,' in the "Encyclopædia Metropolitana.")

HARMONICS OF A SOUND, secondary sounds which accompany any principal and apparently simple sound; as the octave, the twelfth, the fifteenth and the seventeenth, which a delicate ear can dis-

tinctly hear, when any full fundamental sound is made. They are more distinct on bells and other loud sounding bodies than on strings. The harmonics are double, triple, quadruple, &c. vibrations, to those of the fundamental note.

HARMONIOUS, consonant, agreeable to the ear. Those sounds are harmonious, which, when heard together, produce a pleasing combination. In *harmony* the common chords are all harmonious. A *melody* is harmonious, when it has continually two or more successive essential notes belonging to the same chord; and inharmonious, when the successive essential notes belong to different chords.

HARMONIOUS NOTES, the successive essential notes of a melody which belong to one chord; in distinction from the accidental notes, which, when the melody is harmonized, become discordant.

HARMONIST, one versed in harmony; a theoretical musician.

To HARMONIZE, to add two or more parts to a given melody, or melody and base, or to fill up the chords, according to the rules of composition. (See Harmony II, and III, 2.)

HARMONIZED, applied to an air when suitable chords are annexed, to give it fullness of effect.

HARMONIZER, a practical harmonist; generally used in a bad sense, to apply to a scientific harmonist destitute of genius.

HARMONOMETER. (See Monochord.)

HARMONY, a succession of *chords*, according to the rules of progression and modulation. Musical notes and chords are in music what letters and words are in discourse; if these are placed indiscriminately, there will be neither sense nor sentiment. The word *harmony* is of Greek origin, and anciently denoted an agreeable succession of *sounds*, which we

now call air or melody. The ancients knew nothing of the combination of sounds; this is an invention comparatively modern. The laws regulating the succession of combined sounds or chords, were at first chiefly arbitrary, although subject in a measure to the approbation of the ear. The harmonics of a sound, that is, the secondary sounds which accompany any apparently simple sound, (see HARMONIC SOUNDS,) were unknown. These, so far as chords are concerned, are the twelfth or octave of the fifth, the seventeenth or double octave of the third, and we may add the twenty-first or the double octave of the flat seventh: (see *Theory of* CHORDS.) These harmonic sounds may all be heard on the horn, by commencing with its lowest tone and gradually blowing with more and more force. In large organs there are stops for the twelfth and seventeenth corresponding with several sets of the larger pipes, which are sounded in full harmony. These closely combined constitute the principal chords in music; the two first combined with the fundamental, constitute the major common chord; and all these thus combined constitute the chord of the dominant seventh. Other natural chords, (see CHORDS, Class I,) derived from the simpler divisions of a musical string, or by taking other than the fundamental as the lowest note, are used in modern music; together with a variety of figurative chords. (See CHORDS, Classes II and III.)

The remarks we shall make on the subject of harmony, will be embraced under the general divisions of *fundamental*, *plain*, and *figurative* harmony.

I. FUNDAMENTAL HARMONY, the progression of fundamental chords. One chief excellence of music in parts, consists in the proper succession of the fundamental base notes, and the proper connexion of the successive chords. Hence, in treating of funda-

mensal harmony, these two important topics are to be considered ; first, the relative importance of the different notes and fundamental chords of the scale ; and, second, the enchaining of the chords in their progression.

First ; *the relative importance of the different notes and fundamental chords of the scale.*

1 The *tonic* or key note is the most important, and the chord based on it is the principal one in every piece of music. It occurs no less than fifteen times in Old Hundred, (see p. 35, 1*a* and 3*a*.) Regularly, every tune both begins and ends with the tonic chord.

2 Next to the key note, the *fifth* of the scale takes rank. It occurs more frequently in a piece of music than any other note, as more than three fourths of the chords in ordinary tunes contain it. For this reason, and because it is the base note which regularly leads to a final close, it is called the *dominant*. The chord based on this note is also called the dominant chord, which occurs more frequently than any other except the tonic chord. In Old Hundred, it occurs nine times ; (see p. 35, 5*a* and 5*b*.) The fifth is also the key note of the nearest related key, (see Modulation.)

3 The *subdominant* is the next in importance, because its chord has the tonic for its fifth. In modulation, it is the key note of the second related key, having the original key note for its dominant.

4 The *submediant* is the third in relative importance ; as its chord has two notes in common with the tonic chord, and must hence intimately blend ; it is the principal chord of the relative minor key.

5 In the minor key, the *third* of the scale, or the tonic of the relative major key, frequently occurs. These chords have likewise two notes in common.

SECOND; *the* ENCHAINING OF CHORDS *in their progression.*

The general rule respecting two successive chords is that they should enchain or blend together, that is, that one or more prominent notes should be common to both chords. It is often the case, that the same fundamental chord is repeated or continued through several notes; in the following remarks, such successive chords will be regarded as one fundamental chord.

The following are the common rules for the progression of fundamental chords, (see Table, Ex. 6, p. 37;) they are lettered to correspond to the letters in the subsequent examples.

1 The tonic chord regularly begins and closes a tune; we hence take it as the first and principal chord, and trace others from or to it.

2 A. The tonic is most commonly and satisfactorily followed by the dominant chord, (see 1*a*, p. 37,) Ex. 1 A, and Ex. 4, 2, 21, and 23. When the dominant is the accented note, this progression makes an imperfect cadence, Ex. 4, 28, (see CADENCE, Ex. 15, p. 56.)

B. To the dominant, the tonic chord most naturally succeeds, Ex. 3 B, and Ex. 4, 3, 20, 22, and 24. When the tonic is the accented note, and both chords are direct, this progression constitutes the perfect and final cadence, Ex. 4, 8, 32, (see CADENCE, 1, p. 54.)

C. When the dominant is succeeded by an accented relative minor chord, the progression forms the false cadence, Ex. 1 C, (see 3, p. 55;) in other situations, the submediant follows the dominant chord by contrary motion, Ex. 4, 29.

3 D. The next most satisfactory chord following the tonic is the *subdominant*, (see 1*a*, p. 37,) which enchains by having the key note for its fifth, Ex. 2 D,

and Ex. 4, 4, 10, 14, and 26; this may be regarded as an intermediate cadence, Ex. 4, 6, (see 6, p. 57.)

E. To the subdominant, the tonic chord most naturally succeeds, (see 4*a*, p. 37,) Ex. 2 E, and Ex. 4, 5, 12, and 27. When the tonic chord is accented, the progression makes the plagal cadence, (see 5, p. 56.)

F. Preparatory to a cadence, the subdominant is followed by the chord of the supertonic, Ex. 3 F, and Ex. 4, 15; or by the dominant chord, (see 4*a*, p. 37;) in the latter case, the dominant chord usually contains the seventh, Ex. 4, 7, or is suspended by the chord of the 4th and 6th, in order to avoid consecutive fifths; these may also be avoided by the contrary motion: the ear is better prepared for a cadence, if instead of the subdominant chord, we take the chord of the 6th, or 5th and 6th, which are the first inversions of the supertonic common chord and chord of the seventh, (see K below, and 4*c*, p. 36.)

4 G. The third fundamental chord in alliance with the tonic, is the submediant or *relative minor* chord, (see 1*a*, p. 37,) which enchains with two notes, Ex. 3, G.

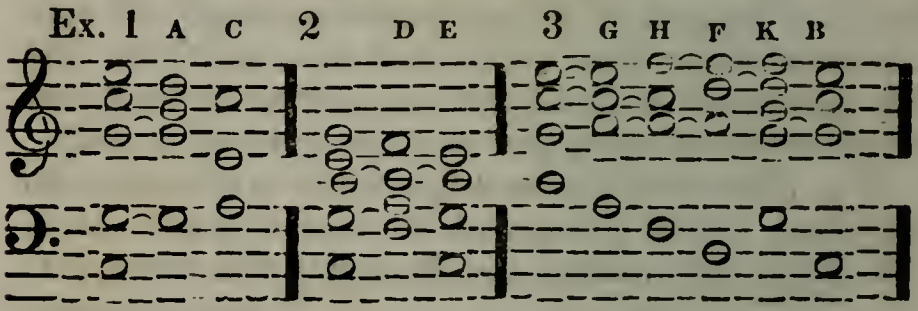
H. The relative minor chord, unless a modulation is made into the minor key, is best followed by the subdominant chord, Ex. 3, H. (see 6*b*, p. 37;) it is frequently followed, however, by the dominant chord, whilst consecutive fifths are obviated by the contrary motion, Ex. 4, 19, (see 6*b*, p. 37.) From the near relation of the relative minor to the tonic chord, taking the key note and its major third, it is often substituted in the place of the tonic, for a false cadence or a suspension of the final cadence, (see c above.)

These four fundamental chords are all which are commonly used in choral harmony; not, however, to the exclusion of others.

5 I. When we wish to give a plaintive character to the music, the *mediant* is used as a fundamental note, and followed by the relative minor chord, Ex. 4, 17, and 18; or by the subdominant as a false cadence, Ex. 12, p. 55.

6 K. Immediately before the dominant chord, the supertonic is sometimes used as a fundamental note, forming an imperfect cadence, Ex. 4, 16, or an intermediate cadence preparatory to the final cadence, Ex. 3, K, and Ex. 4. 30, (see 6, Ex. 24, p. 57.)

7 In the minor key, the predominant chords of the relative major key frequently occur. The tonic chords of the two related keys, are nearly related, having two notes in common.



The result of the above analysis is, that two chords properly enchain, when their fundamental notes proceed thus:

1 A fifth upward or a fourth downward, in which progression the fifth becomes the fundamental. A, E.

2 A fourth upward or a fifth downward; in which progression the fundamental becomes the fifth. D, B, I, K, and Ex. 23 and 24, p. 57, and Ex. 36, p. 90.

3 A sixth upward or a third downward; in which progression the fundamental and third become the third and fifth. F, G, H, and Ex. 23 and 24, p. 57.

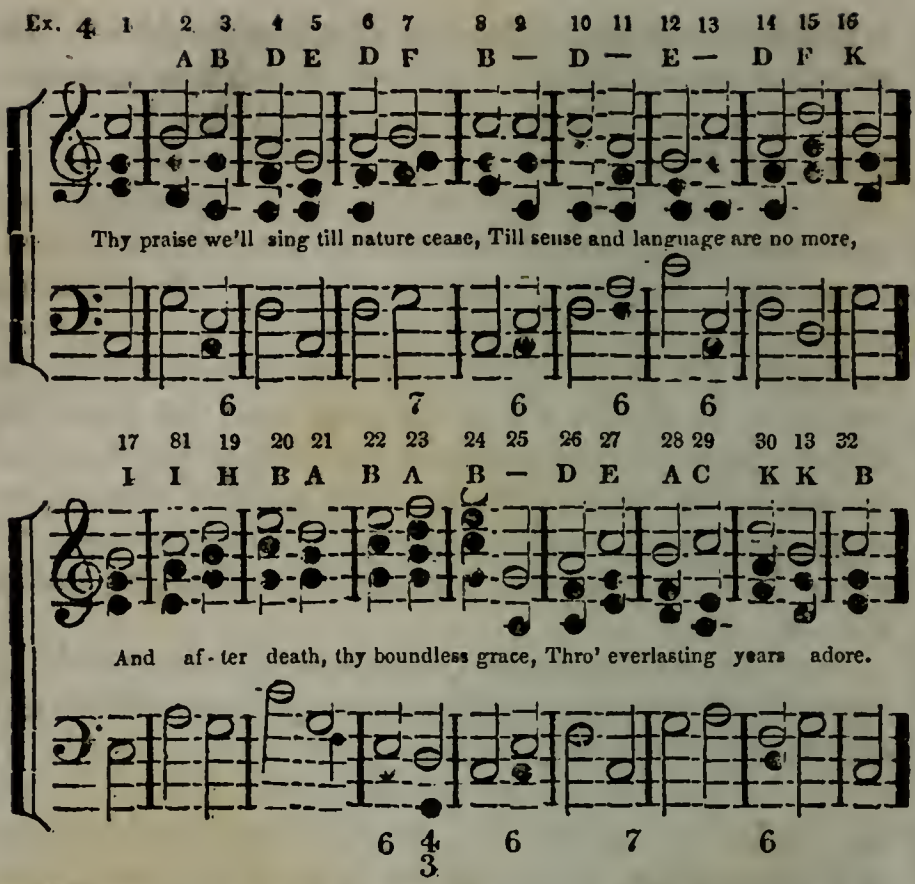
4 The progression by thirds upward or sixths downward, is not agreeable to the ear without an in-

termediate chord. Though the chords blend, yet they are not sufficiently related for ordinary music.

5 The progression by seconds is chiefly used at false cadences, c, and Ex. 12 and 14, p. 55; in descending from the submediant to the dominant, h; in ascending from the subdominant to the dominant commonly dominant seventh, f; and from the tonic (usually inverted) to the supertonic, preparatory to a cadence, Ex. 4, 30. When the progression is made by seconds, to avoid disallowances, one or both the chords usually contain discordant notes, Ex, 4, 7, and 28, which, together with contrary motion, Ex. 4, 19, either satisfies the ear with the progression itself, or keeps it in suspense for a subsequent blending of the chords.

For particular purposes, a genius will disregard the rules of progression, taking care only to observe the rules respecting disallowances. (See Fantasia.)

II. Plain Harmony, the progression of plain simple chords both direct and inverted, such as are used in choral music. This differs from fundamental harmony by the use of inverted chords; or rather, fundamental harmony considers the progression of chords theoretically, while plain harmony regards them practically, or as applied to musical compositions. In fundamental harmony, the base is imaginary; and, in the subsequent examples, marked with black notes; while, in plain harmony, the base is real. By fundamental harmony, we determine what chords to use; and by plain and figurative harmony, how to use them. In all direct chords, the fundamental and figured base are of course the same; and, as was done when chords were first used, a progression may be made with none but direct chords, as in Ex. 3, and Ex 36, p. 90; but the ear soon becomes satiated, and requires inverted chords; as in 3, 9, 11, 13, 22, 23, 25, and 30, of the following example.

Ex. 4.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B D E D F B — D — E — D F K
Thy praise we'll sing till nature cease, Till sense and language are no more,
6 7 6 6 6
17 81 19 20 21 22 23 24 25 26 27 28 29 30 13 32
I I H B A B A B — D E A C K K B
And af - ter death, thy boundless grace, Thro' everlasting years adore.
6 4 3 6 7 6

The fundamental notes when not the same as the base, are black. (See *Fundamental* Base & Chords.)

1 The *tonic* or key note of the above is C;
2 The *dominant* - - - - - - - - G;
3 The *subdominant* - - - - - - - F;
4 The *submediant* or relative minor - A;
5 The *supertonic* - - - - - - D;
6 The *mediant* - - - - - - - - E.

Table of the notes belonging to each of these fundamental chords.

Chords;	Tonic	Dom.	Subd.	Subm.	Supt.	Med.
Eighth,	C	G	F	A	D	E
Seventh,	—	F	—	—	—	—
Fith,	G	D	C	E	A	B
Third,	E	B	A	C	F	G
Fundamental,	C	G	F	A	D	E

With this example and these chords before us, we will proceed to the subject of *plain harmony*, and state, in a simple manner, how; first, *to harmonize a given air*, that is, *to assign the appropriate chords to each note*; second, *to adapt a figured base to a given air*; third, *to fill up the chords when the air and base are given*; and fourth, *to annex an alto or second treble and tenor to a given air and base.*

1 *To* HARMONIZE A GIVEN AIR, in plain choral music.* We will take the treble part of Ex. 4, as the given air, supposing it to be without a base or other accompanying part; being guided in the selection of appropriate chords, by their relative importance as pointed out in Fundamental Harmony, I, page 170, and arranged in the above table; and by reference to such letters, pages 172 to 174, as are written over the air. We take the chord in which the given letter is first found in the Table, unless some reason to the contrary.

The figures refer to the notes as they are numbered.

1 This first note is C, of course we use the tonic chord. See 1, p. 172.

2 B, we select the dominant chord, as B in the Table is first found in that chord. See A, p. 172.

3 C, the tonic chord. See B.

4 A, the subdominant chord. See D, and Table.

5 G, the tonic. See E. We do not here select the dominant; for, in that case, the fundamental base would proceed a single degree without reason.

6 A, the subdominant, same as 4; for a like reason, 11, 14, and 26, have the same chord.

* This method is not given as a direction how a given air *must* be harmonized, nor intended as a particular guide to those who are versed in harmony; but simply to point out to those little versed in the science of music, one process among many by which an air *may* be harmonized, according to the rules of progression.

7 B, dominant seventh. See F, second remark.

8 C, tonic chord for a perfect cadence. See B. For a like reason, 32 has the same chord.

9 C, same chord continued.

10 C, subdominant chord, taken in preference to the tonic where C is first found in the Table, to give variety, and for a plagal cadence.

12 G, tonic chord for plagal cadence. See E.

13 C, tonic, no reason to the contrary : and 27 same.

15 D, supertonic for imperfect cadence. See F and K.

16 B, dominant, imperfect cadence. See K.

17 B, mediant chord ; the sentiment of the words requires it. See I.

18 C, relative minor, for same reason as above.

19 D, dominant. See H, second remark.

20 E, tonic, no reason to the contrary : 22 the same.

21 D, dominant chord.

23 F, dominant seventh, taken in preference to the subdominant, to produce an irregular perfect cadence.

24 G, tonic, for a cadence : this progression, in which some lower part takes the resolution of the discord, is uncommon, but here used to produce the bold effect which the words require.

25 G, same chord continued.

28 B, dominant and also seventh, see 29 ;

29 C, relative minor, see c ; used in preference to the tonic to give variety, and also to prepare for the cadence. Consecutive fifths are avoided by taking a seventh in the previous chord. See F.

30 D, supertonic, to prepare for the final cadence. See K.

31 B, dominant for perfect cadence.

Thus we get the following for the fundamental notes of the chords.

Notes,	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
F. Base,	C	G	C	F	C	F	G	C	C	F	F	C	C	F	D	G	E	A	G

20	21	22	23	24	25	26	27	28	29	30	31	32.
C	G	C	G	C	C	F	C	G	A	D	G	C:

which is the same as in Ex. 4.

2 *To* ADAPT A BASE TO A GIVEN AIR.* In Ex. 4, the fundamental notes, except those which are black, will answer for a base. The others are varied to prevent monotony. As will be observed, when the base is not fundamental, it is oftener taken a third above, which is the first inversion of the chords, (see CHORDS, II;) sometimes a fifth above, particularly in the chord of the dominant seventh, as 23, or as a suspension of the dominant chord before a cadence, see chords 6 : 4th, Ex. 2 and 3, p. 54.

3 is taken a third above to prevent an immediate return to the key note.

9, 11, 13, and 25, are a third above to prevent a repetition of the preceding notes.

22, is taken a third above, 23 a fifth above, and 24 on the key note, because this progression produces such a bold effect as the words require. It would not be allowed except in full harmony.

(For *Figurative base*, see *Figurative* HARMONY.)

3 *To* FILL UP THE CHORDS *to a given air and base*, in plain harmony; first, find the fundamental base notes, either from the figures, (see *Fundamental* BASE,) or according to the method pointed out in 1 above; then see what letters are taken by the base and air, and introduce the remainder. The notes which are wanting are found in the Table p. 176, and expressed in example 4, by crotchets on the treble staff. In doubling intervals, we must be guided by the directions and examples, p. 86; and in omitting, by examples, p. 87.

* These remarks apply only to a base which is to be accompanied with full harmony.

Taking the treble and base in Ex. 4, we have the following fundamental chords: viz.

I. Tonic chords.

	1	3	5	8	9	12	13	20	22	24	25	27	32
Treble,	C	C	G	C	C	G	C	E	E	G	G	C	C
Wanting,	G	G	E	G	G	E	G	C	C	E G C	C	G	G
	E	C	C	E	C	C	C	G	G			E	E
Base,	C	E	C	C	E	C	E	C	E	C	E	C	C

In 22, E the third is taken twice, which is not done except by contrary motion and in full harmony; in this and also in 25 but one C can be conveniently taken. In 24, G the fifth is doubled, which may always be done, provided the third is taken.

II. Dominant chords. III. Subdominant chords.

	7	7	16	19	21	23	28	31	4	6	10	11	14	26
Treble,	B	B	B	D	D	F	B	B	A	A	C	A	A	A
Wanting,	G	G	G	B	B	D B G	F	G	F	F	A	F	F	F
	D	F	D	G	G		D	D	C	C	C	C	C	C
Base,	G	G	G	G	G	D	G	G	F	F	F	A	F	F

In 7 and 28, D the fifth is omitted and the seventh taken to avoid consecutive fifths, (see Base, p. 44.) In 23 the fifth D, instead of G, is doubled, which may always be done.

In 10, the fifth C is doubled instead of F, which is often the case. In 11, the third A is doubled in contrary motion.

	IV. Submediant.		V. Supertonic.		VI. Mediant.
	18	29	15	30	17
Treble,	C	C	D	D	B
Wanting,	A	E	A	A	G
	E	C	F	F	E
Base,	A	A	D	F	E

In 29, the octave A is omitted, and the third C is doubled, which is usually the case with this chord.

In 30, the same is also true.

In a similar manner as the above, we may harmonize any plain tune, by substituting the proper letters, according to the key, for the tonic, dominant, &c. in the Table, p. 176.

Skilful performers on the organ do not take the intervals all on the treble staff, as in Ex. 4, but as they are arranged for a tenor and alto, in the next example; but without much experience, it is difficult to play any notes but the base with the left hand.

4 *To* ANNEX AN ALTO OR SECOND TREBLE AND TENOR *to a given air and base.* In general, the same notes are used for these two parts, as for filling up the chords, in the last article; the only difference is, some notes next to the treble are placed an octave below or next to the base for the tenor, and some few notes are omitted in order to render the parts more melodious or within the compass of the voice.

The following rules may be some guide for this purpose.

1 The notes for the several parts should not cross eaeh other, but should remain in their respective places; that is, the base should be the lowest, the tenor the next above, the alto the third, and the treble the highest. To produce a harmonious melody, however, the tenor and alto may cross; and to prevent false progressions, in extreme cases, the tenor may cross the base, and the alto the treble.

2 The intermediate parts should be so arranged as to divide, at nearly equal distances, the intervals between the treble and base; the larger intervals, however, should usually be next the base.

3 The alto or second treble should generally be at the distance of a third or a sixth below the treble,

and seldom a perfect fifth or fourth, or an octave below, unless it is on the fifth of the key and the base is a sixth below the treble. The imperfect fifth or fourth may be used in discords.

4 The tenor should seldom ascend beyond E or at the farthest F; nor descend below G, unless the base is in unison with it or at a greater distance than a third below; in the latter case, the third sounds too harsh.

5 False progressions, such as consecutive fifths and octaves, and false cross relations, must be avoided; discords must be regularly resolved, and the dissonant note must usually be taken in the part where it is prepared.

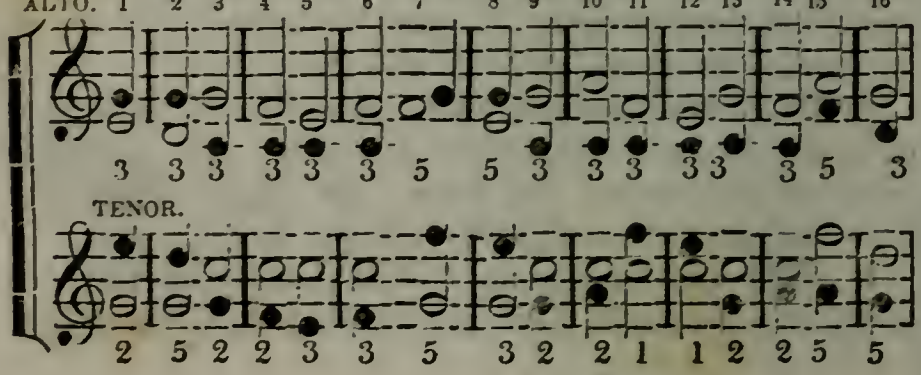
6 To favor the melody, intervals may be omitted or doubled, but generally such only are so marked in the examples pp. 86, 87, and in the order there laid down.

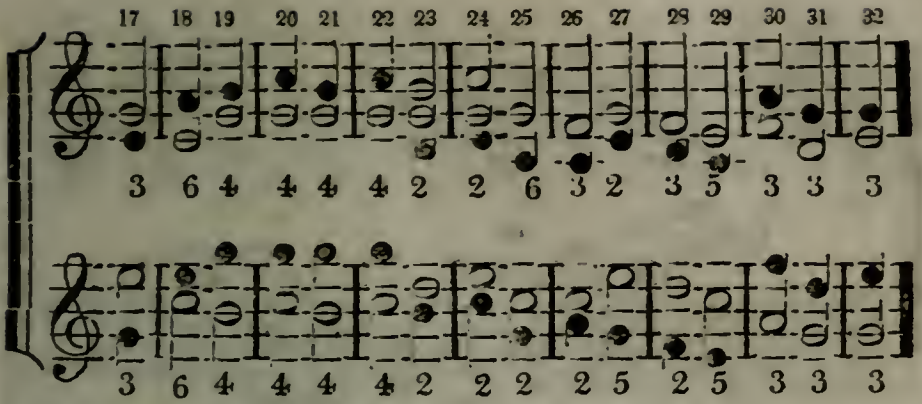
Collecting the notes which were wanting to fill up the chords in Ex. 4, p. 176, as expressed in p. 180 we have,

Chords.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
For alto	G	G	G	F	E	F	G	G	G	A	F	E	G	F
and tenor.	E	D	C	C	C	C	F	E	C	C	C	C	C	C

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	A	G	G	A	B	C	B	C	D B G	E C G		F	G	F	E	A	G	G
	F	D	E	E	G	G	G	G			C	C	E	D	C	F	D	E



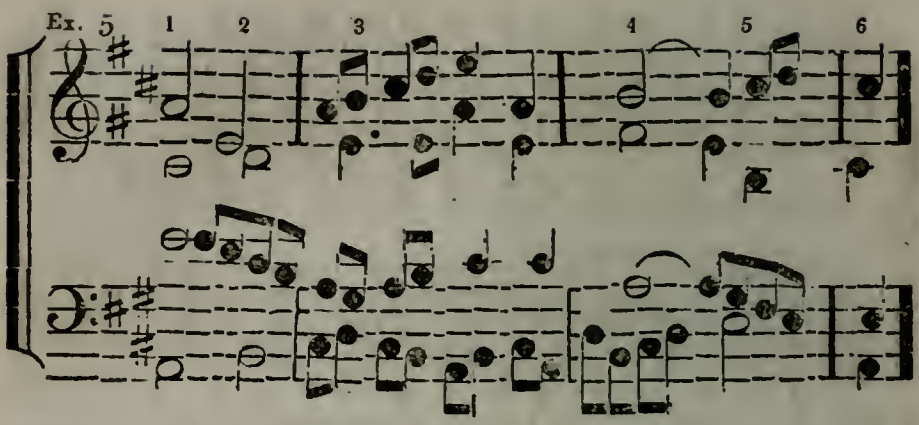


The figures below the staff refer to the rules above, and the minims are the notes taken in accordance with the rules, in preference to the crotchets which *might* be injudiciously taken:

At 7, the alto takes F, as a prepared discord; at 15, the tenor must ascend to avoid consecutive octaves; at 23, and 24, two notes may be taken in the alto; at 25, the treble and alto unite, otherwise the descent of the alto would be too great; and at 27, the alto must be placed a fourth below the treble, so as to have a good progression through the discord at 28.

III. Figurative Harmony, includes, in addition to plain harmony, all the varieties of artificial and accidental chords; or divided and ornamental notes. The few remarks we shall make under this head, will be thus arranged: first, we shall proceed *to analyze* a given phrase of figurative music; second, *to harmonize a given air* either for voices or instruments; third, *to arrange a second part*, but not base, both for a regular duet and in the dialogue style; fourth, *to arrange a base* for the same purpose; and fifth, *to annex a base accompaniment* to a given air.

1 to analyze a piece, we take the following example and proceed according to the method already pointed out, (see *To* Analyze.)

Ex. 5

To *separate* the *accidental* from the *essential* notes, we are guided by the *harmonic figures*, (see *Harmonic* FIGURE.)

At 2, the harmonic figure in the tenor is in the chord of the dominant seventh; to which the notes E, D, and B belong, and C is a transient note.

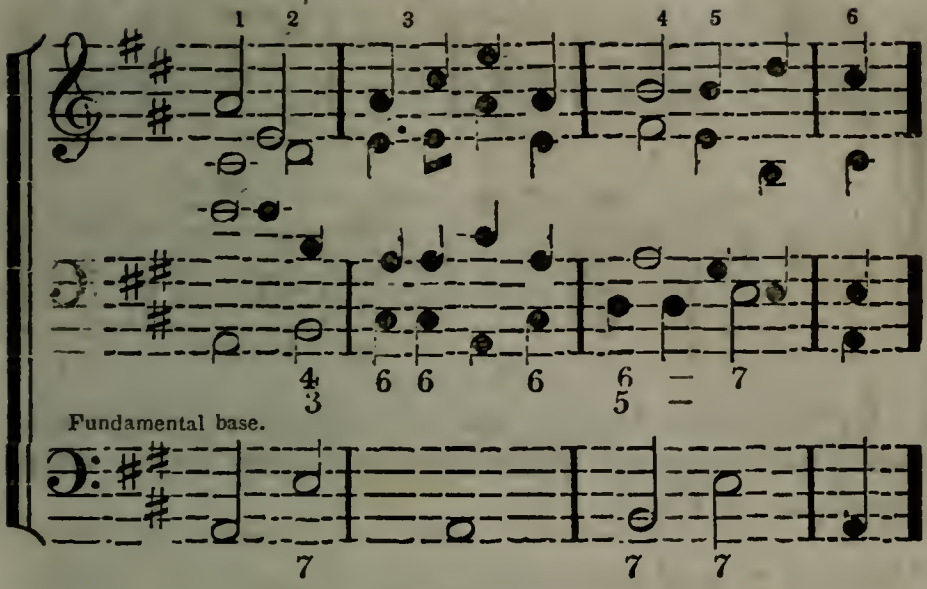
At 3, the harmonic figures in all the parts belong to the tonic chord which extends through the measure; consequently, all but the notes A, C, and E, are transient. When transient notes are taken in the different parts at the same time, those which are struck together or which constitute the transient chord, usually harmonize, as at the second and fourth quavers in this measure; otherwise, they are discordant, as at the other transient notes.

At 4, the figure in the base belongs to the supertonic chord, and C is transient.

At 5, the figures in the treble and tenor belong to the chord of the dominant seventh; and C in the treble and E in the tenor are transient, and A in the tenor is a suspension. The last two quavers in the second measure of the base, and the first in the succeeding measure, are arpeggios, and both belong to the chord, but the first is the essential note.

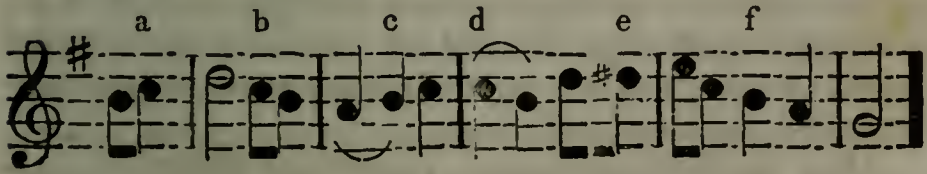
Stripping this phrase of its accidental notes, we have the following. Ex. 6.

Ex. 6 ESSENTIAL NOTES.



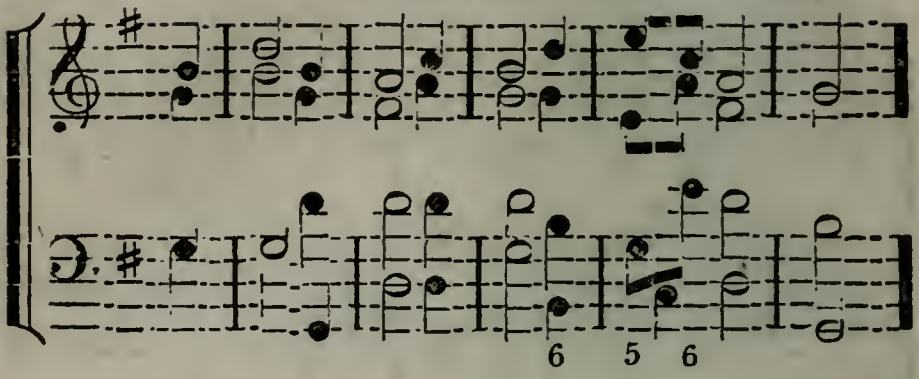
2 *To* HARMONIZE *a given air;* the first step is to get the essential notes, by means of the harmonic figures, Ex. 7; and then, if the harmony simply is needed, the chords may be assigned and the parts arranged as in plain harmony, Ex. 8, (see *Plain* HARMONY, 3 and 4;) but if the accompanying parts are to be melodious, accidental notes may be introduced into them, as in Ex. 5, which may be considered as derived from Ex. 6. See Ex. 9.

Ex. 7 AIR.

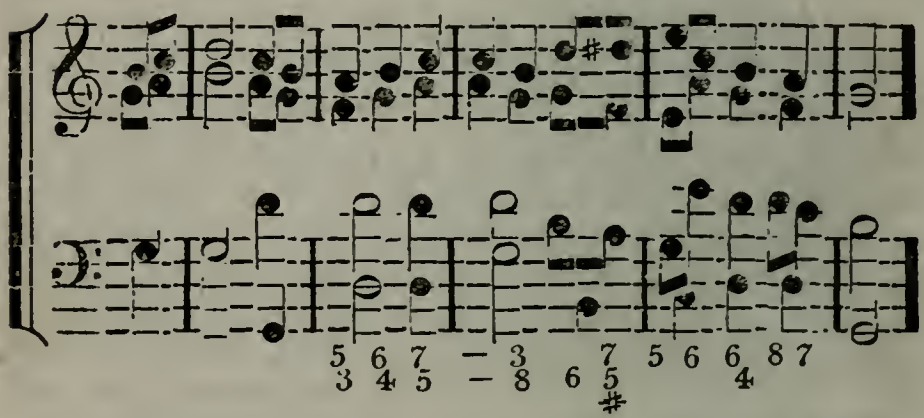


a, *b*, and *c* are transient notes, *d* is a suspension, *e* an alteration, and *f* may also be regarded as a suspension, whose corresponding chord is the 6:4th which very often suspends the dominant chord, when the latter is followed by a close.

Ex. 8 Essential notes and chords.



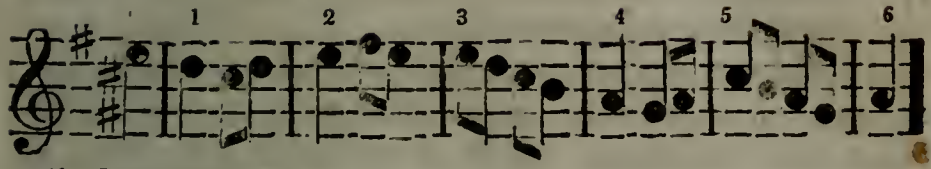
In figurative chords, the corresponding accidental notes in the several parts usually belong to the same chord, as in Ex. 5.

Ex. 9 Figurative notes and chords.

In imitative music, such as fugues, canons, &c., the accidental notes are not so much confined to the same chords, but are more disconnected, which renders the parts more distinct.

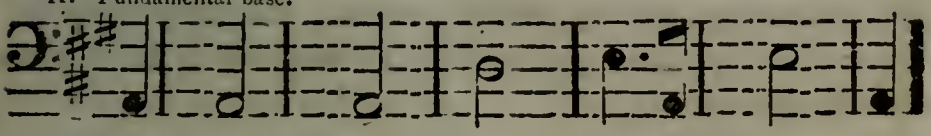
(For further particulars respecting figurative harmony, see "Catel.")

3 *To* arrange a second part *to an air:* first, *a regular second.* We find the chords or base notes by the harmonic figures, Ex. 10; and then follow the directions in rule 3, p. 181.

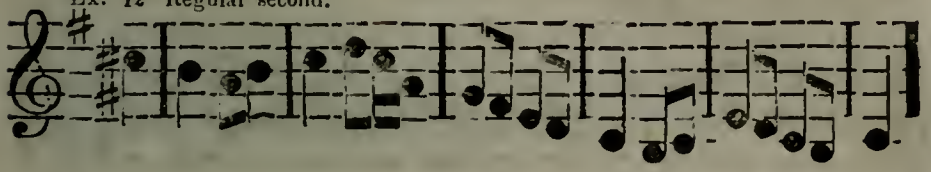
Ex. 10 Air.



11. Fundamental base.



Ex. 12 Regular second.



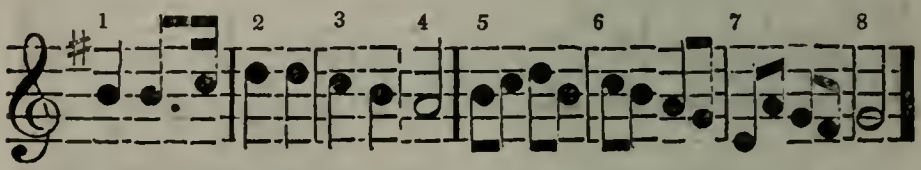
At the measures 1 and 2, the second part is a third below the air. At the third measure, it might have been the same; but, as in the fourth measure the chord requires the second part to be a sixth below the air, this is also taken a sixth below the more conveniently to lead to it. For ease of execution, the last note in the second measure is divided. At the measures 4, 5, and 6, the interval between the parts is a sixth which the chords require. Though the accidental notes in a regular duet are usually made to correspond, yet this is not absolutely necessary; they may either be omitted in one part, while the other has them, or they may be such as do not belong to the same chord. All that is absolutely required is, that the corresponding essential notes belong to the same chord, and that the parts usually move at the distance of a third or sixth from each other.

To arrange a second part in the dialogue style, the same general rules are to be observed as above. The several essential notes must belong to the same chords; but the parts are less restricted in their motion, which may be either similar, oblique or contra-

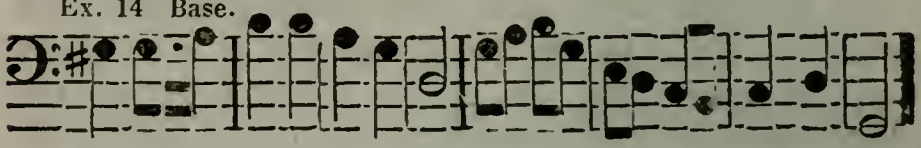
ry, and the parts may cross each other; they may also move in the fugue style.

4 *To* ARRANGE A BASE *as a second part to an air*, requires generally the same rules as to arrange a second treble or tenor. The exceptions are, that, at the cadences perfect and imperfect, the base usually takes the movements which belong to it to make such cadences.

Ex. 13 AIR.



Ex. 14 Base.



At 4, is an imperfect cadence, where the base is a fifth below the air; and at 7 and 8 is a perfect cadence. These two parts are not confined to any particular movement; but may have the various motions of the duets spoken of above. The several essential notes must belong to the same chords; and, unless a cadence is made, a preference is given to the interval of a third or a sixth.

5 *To* ANNEX A BASE ACCOMPANIMENT *to a given air;* when the air is delicate, the base should be simple, containing the most important notes in the successive chords which belong to the air. When the air is not so attractive, the base may be figurative, and may also contain divisions or arpeggios, subject to the rules of progression. (For further particulars, see "Catel's Treatise on Harmony.")

It will be observed, from the above remarks on harmony, that the most important requisite for a harmonist, is a perfect knowledge of fundamental chords

and of harmonic figures; and this is acquired only by a minute analysis of the works of the most distinguished composers, such as Haydn, Mozart, and Beethoven. And the design of the above brief outline, is to put an inquisitive student into such a course of investigation, as will enable him to examine such compositions with understanding and profit.

FIGURED HARMONY, is that in which, for the purpose of melody, several notes pass to one chord. We figure the harmony by conjoint or disjoint degrees: by conjoint degrees, we necessarily use passing notes which do not form a part of the chord, and are not reckoned in the harmony; when the notes move by disjoint degrees, as in arpeggios, none but essential notes can be used. (See *Figurative* BASE, and HARMONY, II.)

HARMONY OF THE SPHERES, a kind of music supposed by the ancients to be produced by the accordant motions of the stars and planets.

HARP, (Lat. *arpa*,) a stringed instrument, consisting of a triangular frame, with strings drawn parallel to each other from the upper bar to one of the sides; consequently, the strings gradually diminish in length and also in size or weight, from the lowest to the highest, so as to be tuned by semitones, like the strings of a piano forte. Its scale extends from F below the base staff, to F in altissimo. It stands erect, on a foot placed at the acute angle of the triangle; and when played, it is stationed at the feet of the performer, who produces its tones by the direct action of the thumb and fingers of both hands on the strings. No instrument has received greater and more valuable improvements from the ingenuity of modern artists than the harp. The improved harp has seven pedals, which serve to produce the flats

and sharps. When the pedals have a double action, that is, are raised to sharpen the strings, and depressed to flatten them, a performer can sound any note either flat sharp or natural, and play in any key; but with the single action he is limited to thirteen or fourteen keys. An additional pedal to act as a damper, has also been invented. In its present state, while the harp forms one of the most elegant objects to the eye, it produces the most attractive effects on the ear. Of all instruments, it requires to be treated with the greatest tenderness. Its character is not that of force and loudness; it speaks with a lisping tongue, and its greatest excellence is that airy lightness which lies in its pianissimo. Men handle it too roughly; their mode of applying the fingers destroys its beauty; and it is only by the soft touch of a female hand, that its delicate notes are drawn out. The harp seldom appears in the orchestra; not having that variety of effect which belongs to the piano forte; only in particular movements, can it be used. Its rigid tone is well adapted to mark the rhythm in slow time. In arpeggio strains, it appears with singular advantage.

The harp is of great antiquity. A thousand years before the christian era, we read of David playing on the harp before Saul. At this early period, we find it in the hands of shepherds, whose occupation and leisure, in those times, enabled them to excel in music. The pipe resounded through the vales to call the flocks together, while the harp was left at home for the song and the dance. With the ancient Welch and Irish bards and minstrels, the harp was a favorite instrument. (See Bards, and "Gardiner's Music of Nature.")

Bell HARP, a small harp, which in performance

is generally swung about like a bell. Its strings are of metal, and are struck by pins fastened to each thumb.

Eolian HARP, (Lat. *Æolus*, the god of winds,) a harp whose tones, as its name indicates, are not produced by art, but by the direct action of the wind. Its construction is very simple, consisting of little more than small catgut strings tuned in unison and distended in parallel lines across a wooden box. The tension of the strings must not be great, otherwise the gentle breeze has not sufficient power to make them vibrate. The instrument placed across a window partly opened and exposed to the wind, will give sounds like a distant choir, increasing or diminishing according to the force of the breeze. The variety of sounds is produced by the variation of the blast. If it is not sufficient to make the whole string vibrate, it will make the string divide itself into aliquot parts, as into halves, thirds, &c., thus producing the harmonics, the octave, twelfth, &c. If the blast is too great to allow the whole string, after it has been forced to one side, to return and pass across to the other, and thus produce a complete vibration; it will also then divide into aliquot parts, which will vibrate separately, while the whole string is forced to one side. In the former case, the harmonic sounds will be very soft, and in the latter, loud. As natural chords (see *Theory of* Chords,) are made up of these harmonic sounds, and as the same string is constantly changing its form and divisions by the ever varying force of the blast, and the different strings are differently acted on by the same blast and produce different sounds; we have a pleasing variety and succession of chords, with all the agreeable variations of loud and soft, and other dynamic expressions.

HARPEGGIO, (from *harp.*) (See Arpeggio.)

HARPER, } one who plays with propriety on a
HARPIST, } harp.

HARPING, a term anciently applied to the art or profession of playing on a harp.

HARPSICHORD, a stringed instrument similar to the piano forte, of a triangular form. Its strings are struck by crow quills inserted in slips of wood called *jacks*. Since the invention of the piano forte, harpsichords have gradually disappeared.

HAUT, (Fr.) high, shrill.

HAUTBOY, (Fr. *hautbois*, high wood, because it formerly played the highest part in the band, since taken by the flute,) a portable wind instrument of the reed kind, consisting of a tube gradually widening from the top to the lower end. Its holes and fingering are similar to those of the clarinet. It has a compass between that of the clarinet and flute, extending from middle C to D or E in alt. Its tones are not so joyous as those of the clarinet, nor so piercing as the high notes of the flute; but it is more adapted to passages of tender expression. In skilful hands, its tones are grateful and soothing, and afford a good accompaniment for the treble voice. Formerly it was used merely as an auxiliary to the violin, but more recently, it has risen to the rank of a solo instrument. In bands, it is not so much used as formerly, seldom more than two being now admitted into the largest; and these are chiefly used for soft passages; but sometimes they combine in unisons or octaves with other instruments, and produce a compound sound novel and charming. (For its Scale, see WIND INSTRUMENTS.)

HEAD, the body of a *note*, (see CHARACTERS 27;) that part of a *violin* to which the screws are attached; the parchment of a *drum*.

HEMI, (Gr.) half; *as a prefix*, it denotes that the interval is diminished half a tone.

HEMIDIAPENTE, (Fr.) an imperfect fifth.

HEMIDITONE, a major third diminished by a semitone.

HEMITONE, same as semitone.

HEPTACHORD, (Gr. *hepta*, seven, and *chorde*, a string,) a lyre with seven strings; also, a term anciently applied to two united tetrachords, forming a series of seven sounds. As an interval, it denoted a seventh.

HEXACHORD, (Gr. *hex*, six, and chord,) an interval of a sixth; also, a series of six sounds. Guido divided his scale by hexachords. (See SOLMIZATION.)

HEY-DERRY-DOWN, an old English burden.

HEY-TROLY-LORY, an old Scotch burden.

HIDDEN, a word applied to those fifths and octaves, which though not written, appear by inserting the intermediate notes. (See CONSECUTIVE, Ex. 16 and 27, pp. 107, 108.)

HIGH, opposed to grave or low. (See ACUTE.)

HOLD. (See PAUSE.)

HOLDING-NOTE, a note that is sustained or continued, while others are in motion.

HORN, a wind instrument, gradually enlarging from the mouth piece to the outer extremity which is usually bell shaped; whose different notes are produced chiefly by varying the intensity of the blast. Under the general title *horn* may be embraced all those instruments, whose different notes are the harmonic sounds of their lowest or fundamental note; viz. the *Hunting Horn*, the *Common Bugle*, the *Keyed* or *Kent Bugle*, the *French* or *Base Horn*, and the *Trumpet*.

I. HUNTING HORN, also called the *horn of the chase*, and the *English horn*, a wind instrument, of a

shrill and ringing tone, used in hunting to animate the dogs or call them together. It was formerly *compassed* or wound around, hence the old phrase to *wind a horn.* The form was anciently semicircular, so as to be conveniently hung at the side of the huntsman. The notes of this horn are but few, and have little melody.

II. Common Bugle, a long straight wind instrument, capable of affording, by judicious management in blowing, a greater variety of notes than the above; and with skill a pleasing melody may be produced. It is now used chiefly in boats as a solo instrument. As an instrument for a band, it has given way to the,

III. Keyed or Kent Bugle, which is *bent*, so to bring its six keys within the reach of the hands. When well managed, it is a most important instrument, either in a military band or orchestra, or as a solo instrument. Its tones are the most mellow and brilliant, and are heard at a great distance, particularly on the water. By enlarging the diameter, the tones acquire a considerable degree of sweetness; from B natural below to G on the treble staff, they nearly resemble a fine tenor voice, and from G upwards, a sweet treble voice; yet with all this delightful and pleasing variety, the instrument never loses the characteristic brilliancy of the bugle. Six keys are adapted to it, by the help of which, in addition to its natural harmonic tones, a good performer may produce almost incredible effects; not being confined to any fixed key, he is quite at liberty to modulate, and execute rapid divisions. See Scale below, p. 197.

IV. French or Base Horn, an improvement of I above, consisting of a long tube twisted into several circular folds. Its compass is from C below the base staff to C in the treble staff; an octave below the trumpet. The music for the French horn, however,

.s always written in C, on the treble staff, an octave higher than its real notes. The tones, when played by a good performer, are very rich and mellow. Solos suited to its character, produce a fine effect when properly introduced; but its proper place is in the band, where it is capable of producing a noble effect.

V. Trumpet, a wind instrument consisting of a folded tube, much used in martial music. Its compass is from C in the base staff to D in alt. Its natural tones are C, E, and G, but a good performer can produce all the other notes. The sound of the trumpet is bold and inspiring. Its splendid tone is heard at a greater distance than that of any other instrument; hence it is pressed into the service of arms. No one has felt its powerful clang like the soldier. Amidst the thunder of war, its lancet tone cuts through the air and drives the cohort to battle. Sounds like these violently agitate the soul: some are appalled, while others are roused to a state of fury:

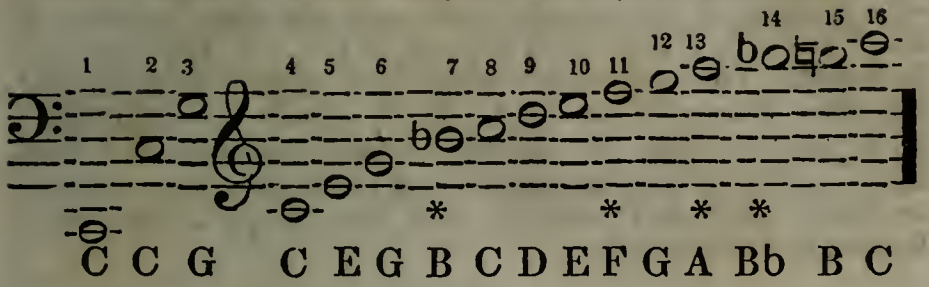
'And the king seized a flambeau,
With zeal to destroy.'

At the time of Handel's visit to England, the softer tones of the trumpet were introduced into the orchestra.

Horns are made of metal, usually brass, but sometimes of silver. They are of great antiquity, being frequently mentioned in scripture. With the exception of the keyed bugle, they have no keys; consequently, they can produce no others than the harmonic sounds to the fundamental or key note. To play in any particular key, crooks are used, which lengthen or shorten the tube. All horn music is written in the

key of C ; but concert horns have crooks for the key, (see CROOKS,) which as well as the music are marked ; thus, for horns, the music is marked at the beginning, *Corni* in D, Eb, &c. ; and for trumpets, *Tromba* in G, F, &c. To produce a sound on a horn, the lips must be compressed, making a small and nearly circular orifice, and so fitted to the mouth piece as entirely to close it externally. When the mouth is in a right position, the air is suddenly forced into the instrument, somewhat in the manner of one spitting something disagreeable from the lips. The less air escapes from the lips, the clearer the sound, (see WIND INSTRUMENTS.) When a distinct sound is produced, the lips should be held firmly in the same position, and the sound continued as long as the breath will allow ; gradually increasing and diminishing in loudness, thus producing a regular swell on the note. Successive sounds are made by quickly obtruding the tongue over the orifice, and not by closing the lips at each sound, which is inconsistent with good blowing. To produce the lowest sound, the lips should be opened a little, the tongue quickly withdrawn, and the air gently forced in. The lowest sound, as written in the scales for the different horns, is always written on C, and the next sound is the G next above. But in theory, the lowest sound is another octave lower, as in the scale below. To produce the note G, the lips must be compressed a little, with a gentle pressure against the mouth piece, and the air forced in with a little more violence. The successive notes above are produced in a similar manner ; by compressing the lips more and more, and increasing the force of the blast. The following are the natural sounds produced by the different instruments.

SCALE FOR THE HORN, TRUMPET, AND BUGLE.



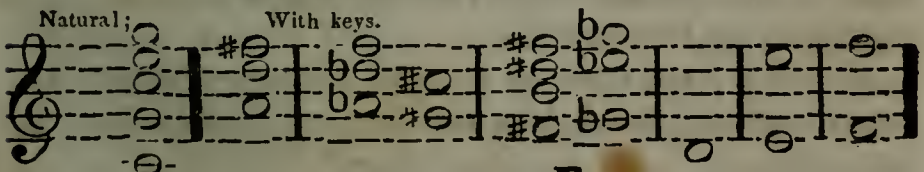
* not correct; Bb and A are a little too flat, and F is a little too sharp. The figures denote the number of vibrations in a given time, compared with the fundamental note or 1.

The intermediate notes, together with the flats and sharps, may be produced, and the false notes corrected, by carefully thrusting the hand or some obstruction into the bell; which lowers the sound the more, the farther it is thrust in: the ear of the performer alone can inform him as to the extent.

The scale of the *Base Horn* is the same as the above, only the notes are an octave lower; but the music for it is written on the same degree of the staff, that is, an octave above the real sounds.

The *Kent Bugle* has six keys; which, together with the natural instrument, furnish seven fundamental notes with their harmonics; thus every semitone of the scale may be played, and the instrument used in the orchestra on any key.

SCALE FOR THE KEYED BUGLE.



L.H.	1K.1	1	1	1	1	1	0
	2K.T	T	T	T	T	0	0
R.H.	3K.T	T	T	T	0	T	T
	4K.4	4	4	0	4	4	4
	5K.3	3	0	3	3	3	3
	6K.1	0	1	1	0	1	1

The six keys are numbered as they occur in succession, commencing at the mouth piece, and are thus named; 1, the F key; 2, E key; 3, D key; 4, B key; 5, A♭ key; and 6, A key. The two first are played with the left hand, and the other four with the right. R. H. stands for right hand; L. H. for left hand; T, thumb, and the figures 1, 3, 4, first, third and fourth fingers, denote that the several keys played by them, are closed; and the 0 in their place shows what keys are to be opened.

The octaves of these notes may be played, and the notes varied by the hand in the bell, as was mentioned above.

HORNPIPE, an animated dance, supposed to be of English or Scotch invention.

HORNPIPE, a musical instrument used in Wales, composed of a wooden pipe, with bores at certain distances, and a horn at each end; the one to collect the wind blown into it by the mouth, and the other to carry off the sounds as modulated by the performer.

HOSANNA, a Hebrew word meaning, 'Save or help now;' a joyful acclamation used by the Jews at the feast of tabernacles.

HUNTING SONG, an animated melody, set to words expressive of the pleasures of the chase; in which the intervals commonly used by horns are introduced.

HURDY GURDY, a stringed instrument whose sounds are produced by the friction of a wheel, and regulated by the fingers.

HUSKY, an epithet applied to tones which are rough and aspirated, like the rattling of dry husks by the wind.

HYDRAULICA, } a water organ of great anti-
HYDRAULOS, } quity, now unknown.

HYMN, (Gr. *hymnos*,) a song of praise; a short religious lyric poem, the sentiments of which are

principally devotion and adoration, intended to be sung in divine worship. Hymns composed of sentiments found in the book of psalms are usually entitled, *Psalms.*

HYPER, (Gr.) over, above; as, *hyper ditonos*, a third above, *hyper Ionian*, higher than the Ionian.

HYPO, (Gr.) under, below; as, *hypo diapente*, a fifth below. (See Modes.)

I.

IAMBICS, verses recited to music. The ancients had two species of iambics, one of which was recited and the other sung to the sound of instruments.

IL, (Ital.) the; as, *Il Basso*, the base.

IMITATION, the repetition of the same or a similar subject or melody in the various parts of a composition, without strictly preserving that exactness in the intervals which a fugue or canon requires. The imitation may be extended to all the parts and through the piece, or may be limited to a single part or a single passage; and may take place at any interval above or below, either in the 2d, 3d, 4th, 5th, 6th, 7th, or 8th; and also by contrary motion, and by diminution or augmentation. The examples in fugue, p. 158, rather belong to the class of imitations. The works of distinguished modern composers, such as Haydn, Mozart, and Beethoven, abound in imitations. In fact, it is a chief excellence in any extended compositions, as without it, that essential

ingredient, unity, could not be preserved. Imitations in short psalm tunes, unless judiciously introduced, produce no good effect. Such examples as were formerly in vogue in that style of music commonly denoted fuguing, had very little but noise to recommend it. But where the parts move together, and the imitation is natural, a pleasing variety is produced.

IMITATIVE, a term applied to music composed in imitation of the effects of some of the sounds of nature or art; as, the rolling of thunder, the swiftness of lightning, the agitation of the sea, the roaring of beasts, the warbling of birds, the raging of storms, the explosion of cannon, &c.: and the tones of the passions; as, sorrow, love, jealousy, hatred, revenge, gaiety, joy, exultation, &c.; (see CRIES and MUSIC OF BIRDS, and also "Gardiner's Music of Nature.") Imitative music when thus properly employed, exerts some of its sublimest and most pleasing energies; transports us to the very scene it describes, or kindles the feeling whose expressions it copies. By the truth of its resemblance, it paints to our imagination whatever the genius of the composer conceives; and while it submits to its imitation the most striking and interesting circumstances of nature, touches the heart, and asserts its empire over our sensations. Beautiful specimens of imitative music are found in Haydn's works, especially in the Creation. Imitative music is the most difficult in composition and in execution; as, if the imitation does not excite corresponding feelings, the effect is often ridiculous. None but masters should undertake to imitate the sublime sounds of nature and art; and even they often fail in their attempt. The design of the imitation to produce the desired effect should, in most instances, be previously known, or the imitation will

not be understood. The songs of birds and cries of animals, can more easily be imitated; (see CRIES.) (For imitation in the execution of words in hymns, to excite the feeling required by the sentiment, see EXPRESSION.)

IMITAZIONE, (Ital.) imitation.

IMPERFECT, not entirely satisfactory to the ear. (See INTERVAL, CHORD, and CADENCE.)

IMPROMPTU, applied to a short extemporaneous composition.

IMPROVVISARE, (Ital.) to compose and sing extempore. A practice once very common with the poet musicians of Italy. The performers were called *Improvvisatori.*

IMPROVVISTA, (Ital.) unexpected; as, *All improvista*, extemporaneous.

IN, (Ital. prep.) in, into, for, &c.

INDEX, (Lat.) (See DIRECT.)

INFINITO, (Ital.) perpetual; applied to a canon whose end leads back to the beginning.

INFLATILE, a term applied to wind instruments.

INGANNO, a term applied to a deceptive cadence, in which a discord is resolved differently from the usual manner.

INNOCENTE, (Ital.) in a simple unaffected style, with a natural and artless execution.

INSECTS. (See NOISES OF INSECTS.)

MUSICAL INSTRUMENT, a sonorous body artificially constructed for the production of musical sounds. Instruments are divided into three classes:

I. STRINGED INSTRUMENTS, as the Piano forte, Harp, Violin, Violincello, Double base, &c. (See these articles, and also STRINGED INSTRUMENTS.)

II. WIND INSTRUMENTS, as the Organ, Flute, Clarinet, Bassoon, Fife, Horn, &c. (See these articles, and also WIND INSTRUMENTS.)

III. Instruments of Percussion, as Drum, Bell, Triangle, Cymbal, &c. (See these articles, and also *Instruments of* Percussion.)

INSTRUMENTAL MUSIC, music composed for instruments, in distinction from vocal music.

INTENSE, applied to sounds of great force, and heard at a great distance.

INTERLUDE, (Lat. *inter*, between, and *ludo*, to play,) a short piece or phrase introduced by the instruments between the verses of a hymn, or previous to the repetition of a strain; also, a short musical piece between the parts of a drama.

INTERMEDIATE, a term applied to those chords which are introduced between remote keys, in order to render the modulation natural and agreeable.

INTERMEZZO, (Ital. intermediate,) an interlude or musical farce, usually introduced between the acts of a serious opera.

INTERRUPTED, broken off. (See *Avoided* Cadence.)

INTERVAL, the distance from one note of the scale to another; or the difference of any two notes in point of pitch, reckoning from grave to acute. The term is applied both to the distance between the notes, and to the notes themselves; thus, G is not only said to be at the distance of a fifth above C, but is itself called the fifth above C.

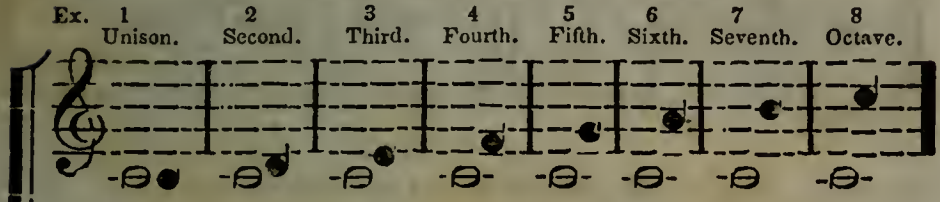
We shall first present *a tabular view of the different intervals used in modern music*, and then give *an alphabetical enumeration of them* with simple definitions and references to the examples in the table. (For the theory of intervals and their relations and combinations, see Scale.)

Intervals for particular purposes are distinguished into general classes, having particular names; such as,

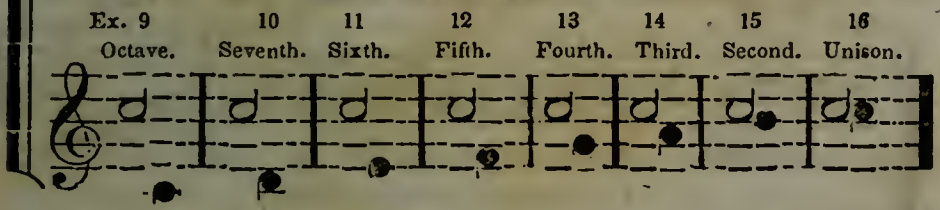
DIRECT, I, III, VII, IX; or. INVERTED, II, VIII. X
SIMPLE, I, II, V, to X; or, { COMPOUND, III. / DOUBLED, IV.
PERFECT, V; or, IMPERFECT, VI.
MAJOR, VII; or, MINOR, VIII.
CONSONANT, V, (see 8;) or, DISSONANT, VI, IX, X,(see 10)
SUPERFLUOUS; IX; or, DIMINISHED, X.
DIATONIC, I to VIII; or, CHROMATIC, IX, X.

TABLE OF THE DIFFERENT SPECIES OF INTERVALS.

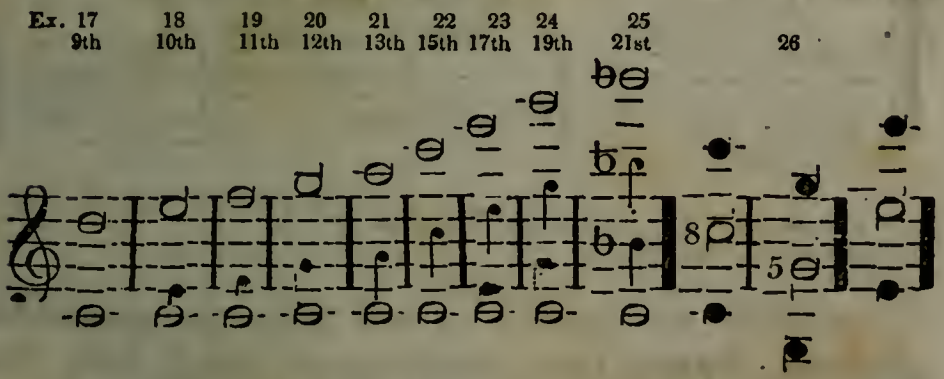
I. SIMPLE AND DIRECT INTERVALS.



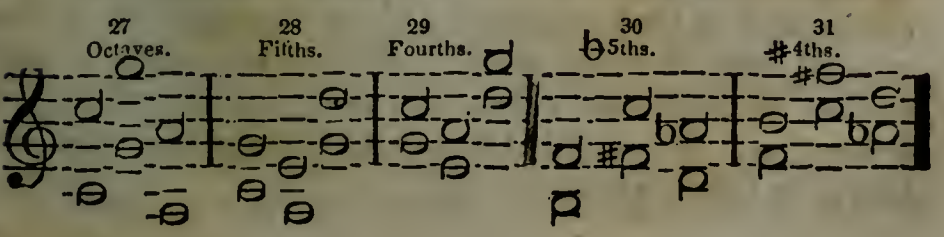
II. SIMPLE AND INVERTED INTERVALS.



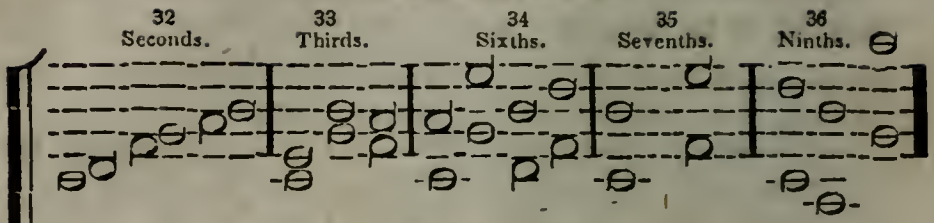
III. COMPOUND INTERVALS. IV. DOUBLED INTERVALS.



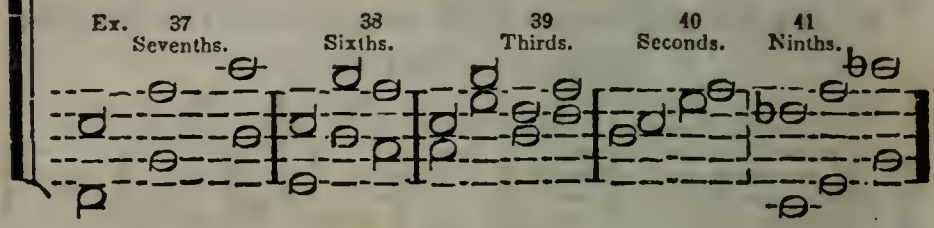
V. PERFECT INTERVALS. VI. IMPERFECT INTERVALS



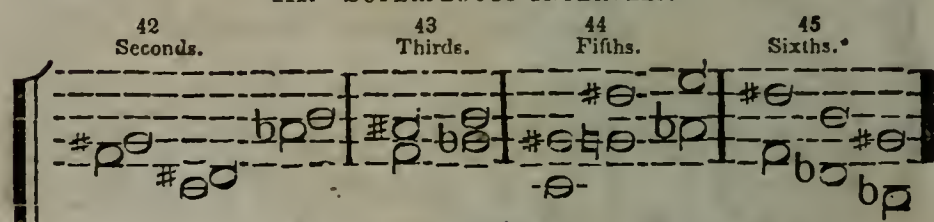
VII. Major Intervals.



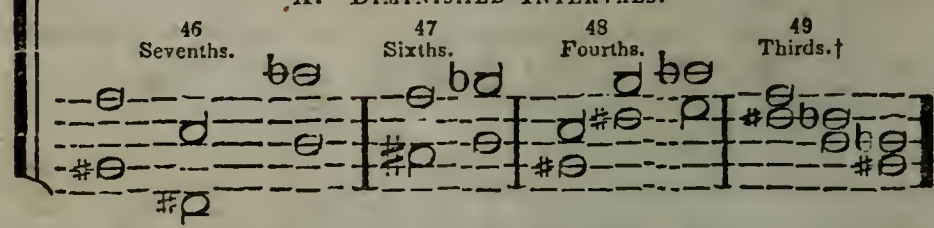
VIII. Minor Intervals.



IX. Superfluous Intervals.



X. Diminished Intervals.



* seldom used, and then in the minor mode.
† not used in harmony.

Intervals are usually named from the *number* of diatonic *degrees* they contain, including both extremes. Thus, the interval from C to E is called a third, and is thus counted, C is the first, D is the second, and E is the third. When we wish to describe an interval below any note, we use the word *below;* as, A is a third below C: otherwise the interval is taken above.

ALPHABETICAL ENUMERATION OF MUSICAL INTERVALS.

1 ALTERED INTERVALS, are such as have one or both extremes raised or lowed a chromatic semitone. Classes IX and X.

2 APOTOME, a major tone diminished by a limma. (See SCALE.)

3 AUGMENTED INTERVALS, same as Superfluous. Class IX.

4 CHROMATIC INTERVALS, same as Altered. IX and X.

5 COMMA, the difference between a major and a minor tone. (See SCALE.)

6 COMPLEMENT OF AN INTERVAL, the interval wanting to complete the octave; same as Inverted interval. II.

7 COMPOUND INTERVALS, surpass the limits of the octave. III.

8 CONCORD, an interval whose two notes sounded together, are agreeable to the ear. (See CONCORD.) Concords are of two kinds, viz.:

1 *Perfect*, as the octave Ex. 8, fifth Ex. 5, and fourth Ex. 4.

2 *Imperfect*, as the thirds, major Ex. 3 and 33, and minor Ex. 14 and 39; and sixths major, Ex. 6 and 34, minor Ex. 11 and 38.

9 CONJOINT INTERVALS, are on two successive degrees of the scale, in distinction from disjoint. Ex. 2, 15, 32, 40, &c.

10 CONSONANT INTERVALS, same as Concord. Ex. 1, 5, 8, &c.

11 DIATONIC INTERVALS, natural intervals, in distinction from chromatic. Classes I to VIII. (See DIATONIC.)

12 DIESIS, the interval in the enharmonic scale between the sharp of any note, and the flat of the

note above; sometimes called a quarter tone. (See Scale.)

13 Diminished Intervals, are minor intervals, whose highest note is flatted, or whose lowest note is sharped half a tone, Class X; in distinction from superfluous.

14 Discord, an interval whose notes when sounded together are disagreeable to the ear. Ex. 2, 7, 10, 15, 17, 25, &c., and Classes, VI, IX, and X. All intervals, except the perfect and imperfect concords, are discords.

15 Disjoint Intervals, are those whose two notes are not on successive degrees of the scale; opposed to conjoint. III, IV; Ex. 3 to 6 &c.

16 Dissonant Intervals, same as Discord. Ex. 2, 7, &c.

17 Double Octave, an interval composed of two octaves, same as Fifteenth. Ex. 22.

18 Doubled Intervals, are the octaves of the simple intervals taken either above or below. Class IV.

19 Eighth, same as Octave. Ex. 8 and 9.

20 Eleventh, the octave of the fourth, Ex. 19; used in suspensions, Ex. 14, p. 81.

21 Enharmonic Interval, same as Quarter-tone. (See Scale.)

22 Extreme flat Interval, same as Diminished. Class X.

23 Extreme sharp Interval, same as Superfluous. Class IX.

24 False Intervals, imperfect intervals. VI.

25 Fifteenth, the double octave. Ex. 22.

26 Fifth, an interval composed of five diatonic degrees. Ex. 5. There are three species of fifth; viz:

1 *Perfect Fifth*, consisting of three tones and a diatonic semitone. Ex. 28.

2 *Imperfect*, *false* or *flat fifth*, consisting of two tones and two diatonic semitones. Ex. 30.

3 *Superfluous* or *sharp fifth*, consists of three tones, and two semitones one diatonic and the other chromatic. Ex. 44.

27 First, same as Unison. Ex. 1 and 16.

28 Flat, same as Minor. Class VIII, & Ex. 30.

29 Flatted Intervals, have their upper notes lowered half a tone. Class X.

30 Fourth, an interval composed of four diatonic degrees. Ex. 4. There are three species of fourths; viz:

1 *Perfect fourth*, consisting of two tones and a diatonic semitone. Ex. 4 and 29.

2 *Sharp fourth*, consisting of three tones. Ex. 31.

3 *Diminished fourth*, consisting of one tone, and two semitones one diatonic and one chromatic. Ex. 48.

31 Imperfect Intervals, are such as are not entirely satisfactory to the ear; opposed to perfect. Class VI.

32 Inverted Intervals, are those in which the lower notes are transposed and placed above the upper ones. Class II. By inversion,

1 A major interval becomes a minor. Class VIII.

2 A superflous interval, a diminished. Class X.

And the opposite; as follows;

Direct,	Inverted.	Direct,	Inverted.
unison,	octave, Ex. 9;	octave,	unison Ex. 16;
second,	seventh, Ex. 10;	seventh,	second, Ex. 15;
third,	sixth, Ex. 11;	sixth,	third, Ex. 14;
fourth,	fifth, Ex. 12;	fifth,	fourth, Ex. 13.

33 Limma, a diatonic semitone diminished by a comma. (See Scale.)

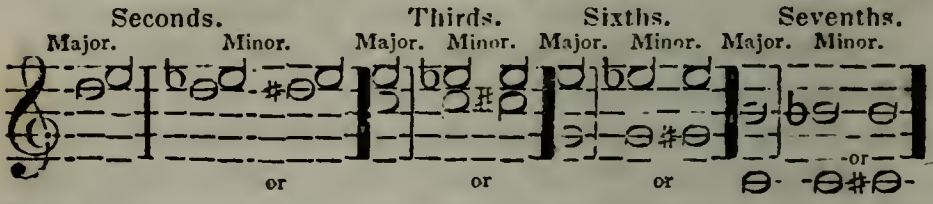
34 Major Intervals, are such natural intervals

as contain the greatest number of tones under the same denomination; that is, in which one of the degrees is a tone which in a minor interval of the same name is a semitone. Class VII.

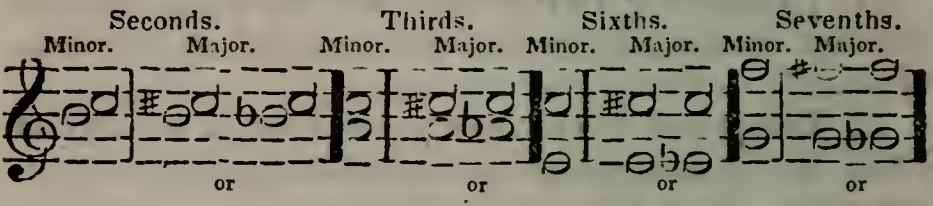
35 Minor Intervals are a semitone less than the major of the same name. Class VIII.

A major interval may be made minor by flatting the upper note or by sharping the lower, XI; and a minor interval may be made major by sharping the upper interval or by flatting the lower, XII.

XI. Major intervals made Minor.



XII. Minor intervals made Major.



36 Nineteenth, the double octave of the fifth. Ex. 24.

37 Ninth, the octave of the second, used in suspensions and discords, Ex. 17; and Ex. 14 and 15, p. 81. There are two ninths, the major, Ex. 36, and the minor, Ex. 41.

38 Octave, a perfect interval consisting of five tones and two semitones, Ex. 8, 9, and 27.

39 Perfect Intervals, are such as perfectly satisfy the ear; they are, in the order of perfection, unison, the octave, fifth and fourth. Class V.

40 Quarter-tone, same as Diesis. (See Scale.)

41 Schisma, an interval equal to half a comma.

42 Second, an interval formed of two diatonic degrees, Ex. 2. There are three sorts of seconds; viz:

1 *Major second*, consisting of a whole tone. Ex. 2 and 32.

2 *Minor second*, consisting of a diatonic semitone. Ex. 15 and 40.

3 *Superfluous second*, consisting of a tone and a chromatic semitone. Ex. 42.

43 Semitone, the smallest interval commonly used in modern music. There are two sorts of semitones; viz:

1 *Diatonic* or *major*, when the notes are on different degrees of the staff. Ex. 15 and 40.

2 *Chromatic* or *minor*, when the notes are on the same degree, but one altered. (See Scale.)

44 Seventeenth, the double octave of the third, Ex. 23; sometimes called *tierce*.

45 Seventh, an interval consisting of seven diatonic degrees. There are three species of seventh; viz:

1 *Minor* or *flat seventh*, consisting of four tones and two diatonic semitones. Ex. 10 and 37.

2 *Major* or *sharp seventh*, consisting of five tones, and one diatonic semitone. Ex. 7 and 35.

3 *Diminished seventh*, consisting of three tones, and three semitones one chromatic and two diatonic. Ex. 46.

46 Sharp Intervals, same as major. Class VII, and Ex. 31.

47 Sharped Intervals, have their upper notes sharped. Class IX.

48 Simple Intervals, are contained within the octave, Classes I and II; in distinction from compound or doubled, Classes III and IV.

49 Sixth, an interval composed of six diatonic degrees. Ex. 6. There are four sorts of sixth; viz:

1 *Major sixth*, consisting of four tones and one diatonic semitone. Ex. 6 and 34.

2 *Minor sixth*, consisting of three tones and two diatonic semitones. Ex. 11 and 38.

3 *Superfluous sixth*, consisting of four tones, and two semitones one diatonic and the other chromatic. Ex. 45.

4 *Diminished sixth*, consisting of two tones and three diatonic semitones. Ex. 47.

50 Superfluous Intervals, are major intervals, with the upper notes sharped, or the lower notes flatted. Class IX.

51 Tenth, the octave of the third, Ex. 18; used in suspensions, Ex. 14, p. 81.

52 Third, an interval consisting of three diatonic degrees. There are four species of third; viz:

1 *Major third*, consisting of two tones. Ex. 3 & 33.

2 *Minor third*, consisting of a tone and a diatonic semitone. Ex. 14 and 39.

3 *Superfluous third*, consisting of two tones, and a chromatic semitone. Ex. 43.

4 *Diminished third*, consisting of two diatonic semitones. Ex. 49.

53 Thirteenth, the octave of the sixth, Ex. 21; used as a suspension of the twelfth, Ex. 15, p. 81.

54 Tone, the interval between two of the larger conjoint degrees of the scale, Ex. 2 and 32; the smaller intervals being semitones.

55 Twelfth, the octave of the fifth, Ex. 20; used in suspensions, Ex. 15, p. 81.

56 Twenty-first, the double octave of the minor seventh. Ex. 25.

57 Unison, not strictly speaking an interval, but a repetition of the same sound; but in theory and for convenience it is regarded as an interval. Ex. 1 & 16.

INTONATION, the performance of the notes of

the scale with the voice or with an instrument according to rules. Intonation includes not only giving the correct tones, that is, not too sharp or too flat nor the wrong intervals; but also giving them with that occasional force, swell, and diminish, on which in a great measure all expression depends. By incorrect intonation, the singer is sometimes led into a key remote from that of the composition, so as not to be able to return, without commencing anew. The causes of incorrect intonation are bad instruction and habits, but chiefly forcing the voice beyond its natural tone. (See FALSE INTONATION.) When the singer performs in a tone beyond the natural voice, the sound should be restrained, and the organs sustained in a fixed position. A correct intonation is one of the first qualifications for excellence in a singer or instrumental performer.

INTRADA, (Ital. entry,) a prelude, or overture.

INTRODUCTION, that movement in a composition, whose design is to bespeak the attention and prepare the ear for the following movements. So much of the effect of a whole piece often depends on the proper style of the introduction, that a judicious composer is very solicitous to avail himself of its advantage; and always writes it with an eye to the general character of the piece. The introduction is usually short, slow, and of a serious character.

INTRODUZIONE, (Ital.) introduction.

INVERSION. (See CHORDS and INTERVAL.)

INVERSION OF PARTS takes place, when in the score a lower part is placed above a higher, and the contrary, as when the tenor and treble interchange parts. In order to avoid disallowed progressions, the rules of double counterpoint must be observed.

INVERTED, an interval is inverted, when the

lower term is placed above the upper. (See Interval.)

IONIC, (see Modes,) a name applied among the ancients to a light and airy sort of music consisting of soft and melting strains.

IRISH TUNES, are so far similar to those of the Scotch, as to partake of their wildness and irregularity; but the Scotch tunes have an agreeable mellowness, which does not characterize the Irish.

IRRELATIVE CHORDS, are such as have no note in common.

IRRELATIVE KEYS. (See Remote keys.)

ISTESSO, (Ital.) the same; as, *l'istesso tempo*, the same time.

ITALIAN SIXTH. (See Chords, p. 91.)

J.

JACK, the hammer of a harpsichord, to which a split crow quill is attached to strike the strings. (See Harpsichord.)

JAR, } a discordant union of several sounds,
JARGON, } badly chosen and out of tune; a confused multitude of sounds whose undulations being inconcinnous and irregular, disconcert and distract the ear, like noises or unmusical sounds.

JEWS HARP, a small instrument made of brass or iron, shaped as a lyre, and supplied with an elastic tongue. When played, it is placed between the teeth, and the tongue is struck with the forefinger and agitated by the breath of the performer. The vibra-

tions of the tongue are made to coincide with those of the breath, on the principles of a system of bodies or by sympathy, as the sound board of a violin vibrates with the different strings. Among some rude nations, it has been an important instrument; and a skilful player will produce very good music from it.

JIG, an air of a lively character, suitable for dancing, in 6 : 8 time.

JINGLES, pieces of tin or other metal placed around the rim of a tambourine.

JONGLEURS, (Fr. jugglers,) ancient instrumental performers who were associated with the French troubadours or provincial poets in their perambulations to the courts of kings and halls of nobles, to sing or play for such as were unable to perform their own works.

JUBILEE, sacred festivals of the Jews, commemorative of the year of deliverance, which was announced by the blowing of the trumpet. Christians, in imitation of the Jews, have likewise established Jubilees, which commenced about 1300; of which festivals, the performance of sacred music forms a considerable part.

JUST, an epithet applied to all consonant intervals, and to those voices, strings, and pipes, which give those intervals with truth and exactness.

Con JUSTO, (Ital.) with taste and precision.

K.

KABARO, a small drum struck with the hand, common in Egypt and Abyssinia.

KAS, a species of drum, the only musical instrument common to the natives of Angola.

KEENERS, the name of the Irish singing mourners. The Irish have always been remarkable for their funeral lamentations; and once were celebrated for their musical art, as exercised in the last sad offices to their departed friends.

KEMAN, a Turkish violin.

KENET, an Egyptian and Abyssinian trumpet.

KERRANA, a long trumpet common in Hindoostan and Persia, from which the most brilliant sounds are produced. Every evening at sunset and two hours after midnight, the Persians sound the *kerrana*, with timbrels, drums, and other instruments.

KETTLE DRUMS. (See *Kettle* Drums.)

KEY, a scale bearing a certain relation to one particular note, called the tonic or key note, which is the fundamental sound from which the scale is derived, and to whose chord all the others tend. Every movement has a particular key to which all the modulations are referred and accommodated, and in which it both begins and ends. There are two species of keys, denominated the major and the minor mode. (See Mode.) The keys are named from the fundamental or key note; thus, if the key note is G, the movement is said to be *in the key of G*, or simply *in G*. The key of the natural major scale is C, and that of the natural minor scale is A. In the fifteenth century, music was generally written in the key of

F, and its relative minor, D. This order of sounds was first adopted, probably, on account of its being most familiar to the ear, as the cries of animals, the buzzing of insects, (see NOISES OF INSECTS,) the roar of storms, the murmurs of brooks, and other grand sounds of the natural world, are to be referred to this key; which may hence be called *the key of nature;* (see 'The rolling of billows,' 'On mighty pens,' or the creation of birds, &c. in Haydn's Creation.) As science improved, other notes were taken as fundamental sounds, from which other keys were formed. Each semitone of the scale may thus, by means of flats or sharps, be made the key note; hence, in the great scale, we may have twenty-four different keys, twelve major and twelve minor; (see TRANSPOSITION.) Each scale, both in the major and minor mode, has a character peculiar to itself. We shall endeavour to give some of the characteristics of each.

1 *The* KEY OF F is rich, mild, sober, and contemplative. Its *relative minor D* possesses the same qualities, but of darker cast, more doleful, solemn, and grand.

2 *The* KEY OF C is bold, vigorous, and commanding, suited to the expression of war and enterprize. The bold effect is exhibited in, 'The marvellous works,' and 'The heavens are telling,' in the Creation. Its *relative minor A* is plaintive, but not feeble.

3 *The* KEY OF G is gay and sprightly; being the medium key, it is adapted to the greatest range of subjects. Its *relative minor E* is persuasive, soft, and tender.

4 *The* KEY OF D is ample, grand, and noble; having more fire than C, it is suited to the loftiest purposes. This was a favorite key with Handel, see 'Hallelujah Chorus,' 'Te Deum,' 'Coronation Anthem'

&c. In choral music, it is the highest key, the treble having its cadence note on the fourth line. Its *relative minor B*, is bewailing, but in too high a tone to excite commiseration.

5 *The* KEY OF A is golden, warm, and sunny. Its brilliant effect is shown in many passages of Haydn's Creation. Its *relative minor F♯* is mournfully grand.

6 *The* KEY OF E is bright, pellucid, and feminine; adapted to brilliant subjects. In this key, Haydn has written his most elegant thoughts. Though higher than D, it is less loud, as it stretches the voice beyond its natural powers.

7 *The* KEY OF B is keen and piercing, but seldom used.

8 *The* KEY OF B♭ is the least interesting of any: it has not sufficient fire to render it majestic or grand; and it is too dull for song. There are, however, some grand choruses in this key in the Creation. Its *relative minor G* is meek and pensive, replete with melancholy.

9 *The* KEY OF E♭ is full, mellow, soft, and beautiful; a key in which all musicians delight: though less decided in its character than some of the others, the regularity of its beauty renders it a universal favorite. Its *relative minor C* is complaining, having something of the whining cant of B minor.

10 *The* KEY OF A♭ is the most lovely of the tribe; unassuming, gentle, soft, delicate, and tender, and having nothing of the pertness of A. Every author has been sensible of its charm, and has hence reserved it for the expression of his most refined sentiments. Its *relative minor F* is serious, penitential, and gloomy.

11 *The* KEY OF D♭ is awfully dark. In this

remote key, Beethoven has written his sublimest thoughts; he never enters it, but for tragic purposes.

To account satisfactorily for these different effects is difficult; but every musician is sensible of their existence. It is evident, however, that it does not arise from the comparative imperfection of the different scales, as has been generally supposed: this has been demonstrated by the patent organ recently invented by Mr. Liston, (see ORGAN,) in which every note is given perfect, without destroying the character of each scale. The most probable cause is the different and comparative elevation of the key note. (See "Gardiner's Music of Nature.") The peculiar effects of the several keys are well exemplified in Haydn's Creation.

KEY, a name for the pieces of wood or ivory in an organ or piano forte, which are struck by the fingers in playing. The keys represent all the semitones of the great scale, from the lowest to the highest note of the instrument; the long or white keys represent the natural tones, and the short or black keys, the flats and sharps.

KEY BOARD, the whole range of the keys of a piano forte or organ.

KEY NOTE, the principal note of a piece of music, from which the harmony is derived, and to which all the other notes bear an intimate relation. A piece of music generally begins and always ends with the key note, especially the base. (See SCALE.)

KINOR, the appellation given to the harp used by David in curing Saul. In Gen. 4: 21, its invention is attributed to Jubal.

KIT, a very small violin, sixteen inches in length, capable of being carried in a case in the pocket.

KNELL, the slow periodical sound of a bell at a funeral.

KUSSIR, a Turkish instrument, mounted with five strings, distended over a skin which covers a sort of wooden plate.

KYRIE, (Gr.) O Lord; the word with which all masses commence. It is sometimes used substantively as the designation of the movement itself; as, that *Kyrie* is well composed.

L.

L. Left hand; written over notes to be played by that hand.

LA, (Fr. article,) the, as, *La Chasse*, in the hunting style.

LABIUM, (Lat.) the lip of an organ pipe.

LACRIMOSO, } (Ital.) *lagrima*, a tear,) in a
LAGRIMOSO, } pathetic, mournful, bewailing tone.

LAMENTABILE, }
LAMENTEVOLE, } (Ital. *lamentare*, to complain, to lament,) a slow
LAMENTOSO, } movement requiring a plaintive pathetic style of execution.

LAMENTATIONS, funeral music of the ancient Jews. At the death of any one, it was not only usual to employ flute players to perform over the dead body of the deceased, but to hire at least one female mourner or *lamentatrix*.

LAMENTS, the name given by the Scotch to some of their old serious and melancholy airs.

LANGUENTE, }
LANGUEMENTE, } (Ital. *languire*, to droop, to to pine,) a slow and soft
LANGUIDO, } movement, to be performed in a dolorous melancholy style.

LARGE, an ancient musical character. (See NOTES.)

LARGHETTO, (Ital. dimin.) not so soft and slow as *largo*.

LARGO, (Ital.) a very slow and rather soft movement, in which the tones are to be sustained their full length, and executed with the utmost taste and expression. (See MOVEMENT.)

LARYNX. (See VOICE.)

LAY, a short melancholy song or poem.

LEADER, the performer that takes the leading part and plays the principal violin in the orchestra; who gives to the choir or band the time and style of the movements. Next to the conductor, the leader holds the most important station in the orchestra. It is to him that the other performers look for direction in the execution. On his steadiness, skill, and judgment, and the attention they give to his motion, manner, and expression, the effect of the performance in a great measure depends.

LEADING NOTE. (See INTERVAL and SCALE.)

LEAP, a passage from one note to another by disjoint degrees; or passing over intermediate intervals in proceeding from one note to another.

LEGATISSIMO, (Ital. superl.) as connected and smooth as possible.

LEGATO, (Ital. *legare*, to bind,) in a smooth connected manner, the opposite of *staccato*. It implies that the notes should be gently struck, gradually swelled, and sustained smoothly until the next note is struck; thus blending the sounds in a smooth and gliding manner. For instruments, *legato* passages are marked by slur drawn over the notes. When it is intended to continue through the piece, the term, *sempre legato*, is used.

LEGER LINE. (See CHARACTERS 28 & Ex. 2.)

LEGGERMENTE, } (Ital.) lightly, easily, swift-
LEGGIERO, } ly; with a light touch and motion.

LENE, a pedal or sustained note. *(not used.)*

LENTANDO, (Ital, *lento*, slow,) going slower. (See RETARDANDO.)

LENTEMENTE, (Ital.) slowly, and,

LENTO, (Ital.) slow and gentle; nearly the same as *adagio.*

LESSON, a musical composition intended for the improvement of the performer. Lessons may be easy or difficult; but they should always be interesting. The name was formerly given to those exercises for the harpsichord and piano forte, which are now called *sonatas.*

LETTERS OF THE SCALE, the first seven letters of the alphabet which serve to distinguish the notes.

AD LIBITUM, (Lat.) at pleasure; the performer may accelerate or retard a movement, and introduce a cadenza or extemporaneous flourish. When written over a part, it denotes that it may either be omitted or performed.

LICENSE, *in harmony*, a violation of any of the established rules of composition, in order to produce a particular effect. This kind of freedom is at best a hazardous resource: and the composer or performer who ventures it, should possess as much genius and science as boldness, and always compensate his trespass by some felicitous and striking effect. The rules of harmony having changed, as the art became more perfect, what was formerly a license, is now allowed. The tritone was formerly a forbidden interval, now it is used with effect. The chord 4 : 3d was not used in Handel's time, now it is the most common of discords.

LICENSE OF TIME, the use of triplets, &c. (See CHARACTERS, Ex. 37 to 40, p. 71.)

LIGATURE, same as slur. (See SLUR.)

LIGHT, a term applied to any thin airy composition; applied also to the action and touch of a piano forte or organ; thus, when the keys do not resist the action of the fingers, the instrument is said to have a *light touch;* in like manner, a performer when he draws by pressure only soft and pleasing notes from the instrument, is said to have a light touch.

LIMMA, (Gr. a remnant.) (See INTERVALS, 33.)

LINES, (see CHARACTERS, Ex. 1.) The invention of lines is attributed to Guido. At first, the spaces between them were not used.

LIQUID TONES, soft flowing tones of a voice or wind instrument.

LIRA, (Ital.) a lyre or harp.

LIRA DA BRACCIA, (Ital. *braccio*, the arm,) an ancient instrument, mounted on seven strings, five placed over the finger board, and two by its side.

LIRA DA GAMBA, (Ital. *gamba*, the leg,) similar to the above but longer.

LITUUS, (Lat. the augur's crooked staff,) a trumpet for horse, with a crook at the top.

LIUTO, LEUTO, (Ital.) a lute.

LOCO, (Ital. in place,) at the usual place, or as written; a term used after a passage required to be performed in 8va, or an octave higher than written; implying that the notes are again to be played in place.

AL LOCO, (Ital.) to the place; a term used in violin music, signifying after a shift, that the hand is to be used as before.

LONG, an ancient note equal to two breves. (See NOTES.)

LOURE, (Fr.) a short air suitable for dancing, of a movement rather slow and dignified, in 6 : 4 time.

LOW, grave; in distinction from high or acute,

To LOWER A NOTE, to flatten or depress it.

LUOGO, (Ital.) same as *loco.* (which see.)

LUSINGANDO, (Ital. *lusingare*, to flatter,) smooth and soft, in a playful style.

LUTANIST, a performer on the lute.

LUTE, a very ancient wind instrument, formerly much used. At first it contained only five rows of strings, but six or more were afterwards added. The lute consisted of four parts: viz. the table; the body, which had nine or ten sides; the neck, which had as many stops as divisions; and the head or cross, in which the screws for tuning it were inserted. In playing the instrument, the performer strikes the strings with the fingers of the right hand; and regulates the sounds, with his left. Its origin is not known.

LYDIAN, (see Mode.) The name was applied to an effeminate sort of music, used at first by the Lydians.

LYRA VIOL, an ancient instrument, formerly much in use; so named, because it was tuned in a manner formerly called *harp way.* It was something like the common viol, and had six strings, and seven frets or stops, to which were assigned the seven letters of the alphabet, B, C, D, E, F, G, H; the letter A answering to the open strings.

LYRE, the oldest stringed instrument, said to have been invented by Mercury in the year of the world, 2000. According to ancient traditions, however, Apollo is said to have found a dead tortoise on the banks of the Nile, with nothing remaining in the interior of the shell but the dried sinews that were stretched across: these were vibrated by the wind passing through the shell, and caused the sound which struck the ear of the god. For a thousand

years afterwards, the shell of the tortoise was deemed an essential part of the lyre. Afterwards, the twang of his sister Diana's bow, suggested an instrument of a larger kind; and the primitive lyre now assumes the form of David's harp. But writers generally agree in giving Mercury the honor of the invention; and say that the knowledge of the instrument as formed by him, was transmitted by Orpheus, who taught the use of it to Thamyris and Linus, the latter of whom communicated it to Hercules. From Hercules it passed to Amphion the celebrated Theban Lyrist; and afterwards to the Grecian Terpander, who carried it into Egypt greatly improved, and exhibited it to the Egyptian priests as his own invention. The first lyre had only three strings, which Mercury resembled to the three seasons into which the Greeks divided the year; viz. summer, winter, and spring: assigning the grave string to summer, the acute to winter, and the mean to spring. The number of strings was afterwards increased to seven. Of the form of the ancient lyre, but little is known. From the ancient statues of Apollo, it appears that in its improved state, it consisted of a frame whose sides were curvilinear, formed somewhat like the letter S, meeting at the center of the base, and inserted at the top into the extremities of a cross bar, to which were fastened the upper ends of the strings distended to it perpendicularly from the bottom.

LYRIC, (from *lyre*,) an epithet applied to poetry to be sung: because, formerly the voice was accompanied by the lyre.

LYRIST, a performer on the lyre.

M.

M. Abbreviation of *Mezzo.* (See ABBREVIATIONS.)

MA, (Ital.) but; as, *allegro ma non troppo*, lively but not too fast.

MADRIGAL, an elaborate vocal composition in four, five, or six parts, full of imitations, fugues, &c. very artificial in construction. Madrigals were much in fashion during the last century, now they are scarcely known. (See DOUBLE COUNTERPOINT.)

MADRIGALIST, a composer of madrigals.

MAESTOSO, (Ital.) majestic; with dignity and grandeur.

MAESTRO DI CAPELLA, (Ital. *maestro*, master,) master of a band or choir of musicians, usually but not exclusively engaged in a church; the term is commonly applied to one in the employ of a sovereign or nobleman.

MAGGIORE, (Ital,) greater. (See MAJOR.)

MAGNIFICAT, (Lat.) the first word of the song of praise sung by Mary in the house of Zacheriah; 'My soul doth magnify the Lord,' &c.; Luke 1: 46; hence, the term is applied to a composition in which these words are used.

MAJOR, (Lat.) greater. (See CHORD, INTERVAL, and MODE.) The term *major* is applied only to an interval which may be diminished half a tone, and still be consonant.

MANCANDO, (Ital.) diminishing. (See DIMINUENDO.)

MANDOLINE, called also *bandora*, a stringed instrument something like the guitar, mounted with four double strings tuned the same as a violin. It was played with plectrum or quill.

MANDORA, a kind of small lute, similar to the above.

MANICHORD, a species of spinet, formerly used in nunneries. (See CLARICHORD.)

MARCATO, (Ital.) marked, articulated; every note distinctly struck. (See STACCATO.)

MARCH, a military piece, composed for clarinets, trumpets, trombones, and other military instruments, intended to regulate the steps of a body of soldiers.

MARCIA, (Ital.) a march of soldiers. (See MARCH.)

ALLA MARCIA, in a martial or military style.

MARTIAL MUSIC, music suited for a military band; a species of vocal and instrumental music used on triumphal occasions.

MARZIALE, (Ital.) martial, warlike.

MASCHARADA, (Ital.) music composed for the gestures of pantomimes and buffoons.

MASQUE, a musical drama, consisting chiefly of singing, machinery, and dancing.

MASS, the service of the Romish church, entirely performed in musical sounds; a vocal composition, performed during the administration of high mass in Catholic countries, and mostly accompanied with instrumental music. These compositions consist of solos, duets, trios, and choruses. The words are taken from the bible, and are in Latin. The mass always commences with a *Kyrie* or *Christe eleison*, a petition for mercy; then follows the *Gloria in excelsis*, an ascription of praise; *Credo*, the creed; then *Sanctus*, *Hosanna*, and *Benedictus*; and the whole concludes with an *Agnus Dei*, the Lamb of God, a song of praise to the Savior. In modern times, the composition of musical masses has called into requisition the talents of the most eminent composers. Haydn was the first who gave them their present brilliancy

of accompaniment. (See SACRED MUSIC.) The masses of Haydn and Mozart are some of the most splendid compositions in modern times.

MATINS, morning worship in the Romish church, a service consisting chiefly of singing.

MATTINATA, (Ital. *mattina*, the morning,) a morning serenade.

MAXIMA, an ancient note; same as Large.

MAXIMUM, (Lat.) the greatest; applied to intervals.

MAZURKA, a national Polish dance.

MEAN, intermediate, middle; a term formerly applied to the intermediate parts of harmony, as the alto and tenor.

MEAN CLEF, the alto or C clef, because it is intermediate between the treble and base clef. *(little used.)*

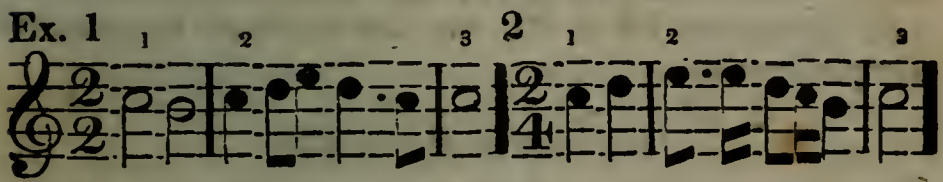
MEAN TIME, time intermediate between slow and fast.

MEASURE, one of those equal quantities of time into which music is divided by means of bars. A piece of music is divided into equal portions, sufficiently long for the ear to catch and subdivide their quantity; and sufficiently short for the impression of one not to be effaced before the return of another, and for its equality to be felt: each of these portions is called a *measure*. Each measure is also divided into a certain number of equal portions, called *parts of measures;* which are marked by equal motions of the hand or foot. (See BEATING TIME.) Each of these parts of a measure is filled by a note, whose relative quantity is determined by the sign prefixed to the movement; as in the first measure of each of the following examples. The only notes commonly used to indicate the parts of measures are halves, , quarters, , and eighths, . In any va-

riety of measure, the notes which indicate the parts of the measure are not alone used; but others may be introduced, either by dividing these notes, as in the second measure of the examples, or by uniting them, as in the third and fourth measures. The measures commonly used are the *double*, *triple*, *quadruple*, and *sextuple*. The most simple is the *double* measure, which has two parts. Ex. 1, 2, and 15. The upper figure in every sign denotes the number of parts in a measure, and the lower figure points to the kind of notes; 2 standing for halves, 4 for quarters, &c. Thus, the first variety of double measure contains two halves or minims, and is called two-two measure; and the second, two quarters or crotchets, called 2 : 4 measure.

Double Measures.

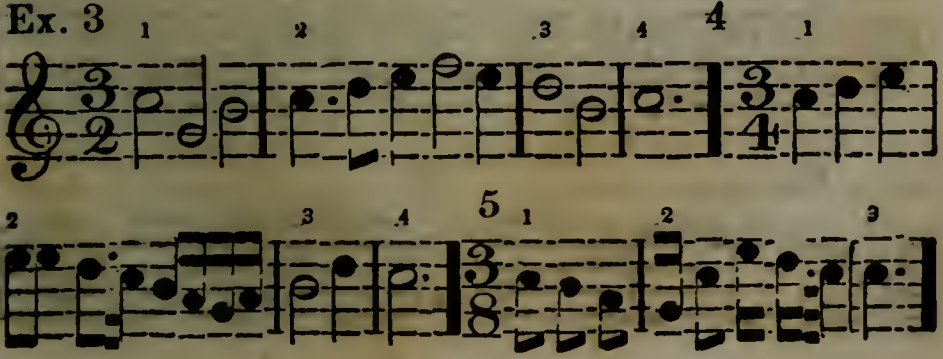
Ex. 1



The first variety of *triple* measure contains three halves, and is called 3 : 2 measure, Ex. 3; the second contains three quarters, called 3 : 4 measure, Ex. 4; and the third, three eighths or quavers, called 3 : 8 measure, Ex. 5.

Triple Measures.

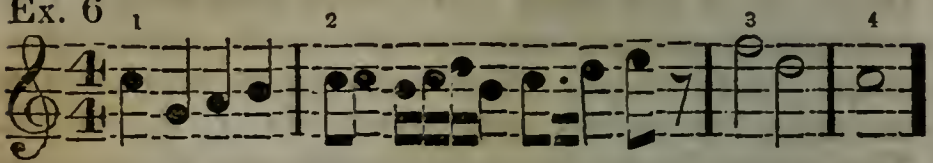
Ex. 3



The only common variety of *quadruple* measure is the four quarter, called 4 : 4 measure, Ex. 6.

QUADRUPLE MEASURES.

Ex. 6

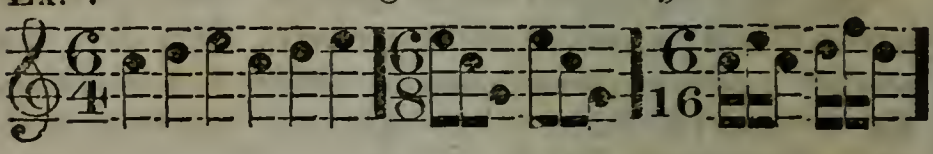


The above are all the simple measures commonly used ; the latter of which may be regarded as equivalent to two double measures.

The other varieties of measure will be sufficiently illustrated by the signs and their equivalent notes. The first two, Ex. 7 and 8, are the common sextuple measures, which are equivalent to two triple measures. Examples 9 to 14, are compound measures ; and Examples 15 to 18, are the unusual varieties of simple measure.

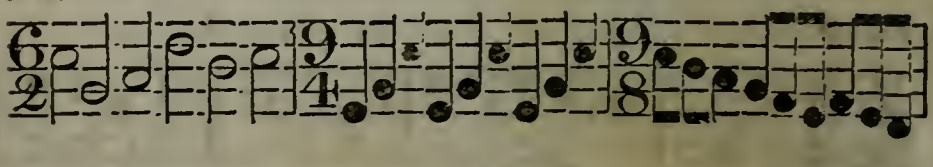
SEXTUPLE MEASURES.

Ex. 7 8 9

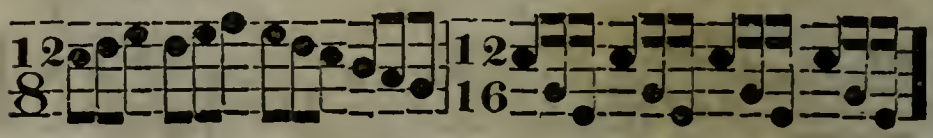


COMPOUND.

Ex. 10 11 12

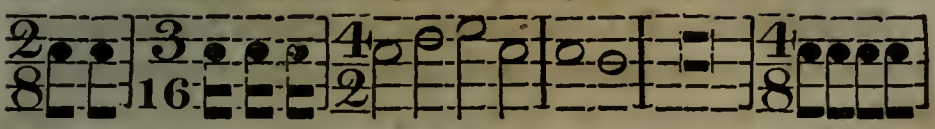


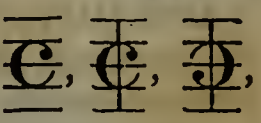
Ex. 13 14



DOUBLE. TRIPLE. QUADRUPLE.

Ex. 15 16 17 1 2 3 18



The characters called C, and barred C, have commonly been used for  , the varieties of measure exhibited in Ex. 6, 17, and 1; but they are now giving place to the more significant figures. (See "Manual of Instruction.")

MEASURE NOTE, the note which fills a measure; as the last note in each example 1 to 6, and 17 above.

MEASURE REST, the semibreve rest, because it always fills a measure. (See CHARACTERS.)

MEDIANT, the third degree of the scale. (See SCALE.)

MEDIUM, (Lat.) mean or middle. (See MEAN.)

MEDLEY, a piece of music made up of passages taken from various compositions; a humorous, hotch-potch assemblage of passages taken from various songs, so arranged that the latter words of the sentence of one song connect with the beginning of another.

MELODIC, relating to melody.

MELODIC RELATIONS, a term referring to the notes of the scale or a piece of music, as it regards their relative pitch and their connexion with each other, or their relation to particular chords. (See *Harmonic* FIGURE; and "Manual of Instruction.")

MELODIOUS, a term applied to any pleasing succession of sounds, or an air of a tender and graceful expression; also applied to the tones of a clear and melliffluous voice.

MELODIST, a composer and singer of elegant melodies; in contradistinction to harmonist.

MELODRAMA, a drama in which music is introduced to illustrate and enforce the action of the piece.

MELODY, (Gr. *meli*, honey, and *ode*, a song,) a succession of simple sounds, so regulated as to produce a pleasing effect on the ear: in a general sense, it embraces that department of music which relates to the pitch of sounds. (See "Manual of Instruction.") Melody is distinguished from *harmony*, by not necessarily including a combination of parts. Melody may be called the soul of music; and being the immediate work of genius, no fixed rules can be given for its formation, any farther than that it must consist of harmonic figures. Gardiner defines melody to be, '*A succession of sounds at harmonic distances.*' It is only one of the forms of harmony; and its excellence or beauty will always depend on the order of the chords through which it is made to pass; or in other words, on the correctness of the harmony by which it is generated. An ingenious writer says: 'The reason why those intervals which produce harmony also produce melody, seems to be, that *melody is retrospective harmony*, or depends on a perception of the harmonical relation to sounds that have preceded. The connexion is no where so apparent as in passages of arpeggio. By recollection, the sounds which have just passed us, linger in the ear, and are accommodated with harmonious combinations in those that follow.' A succession of sounds is the first thing that catches our attention, while the evolutions of harmony pass over the ear of most persons unnoticed. It is said that in China and other eastern nations, harmony is not yet introduced into their music. They have no music in parts as we have, and the

voices and instruments join in unison. Harmony is an intellectual enjoyment; it affects not the passions merely, but is addressed more to the understanding than to the emotions of the heart. It is melody alone that touches the feelings, as it imitates the natural tones and expressions of the human voice. Melody belongs entirely to the imagination. It is the result of a happy inspiration, not of the calculations of science. Art may embellish and enrich the works of genius, but the gift of invention we receive directly from nature. With imagination and taste, every person is able to form melodies. The laborer following his oxen, and the shepherd tending his flock, sing airs which they sometimes compose at the moment. In these irregular and little varying melodies, we often meet with traits of character, original turns and passages, of which the charm strikes the musician in such a lively manner, that he is eager to collect them. The forests and mountains have also their composers. The Russian, Swiss, Scotch, Tyrolese airs, and those of the Muleteers of Estremadura, have all been formed by rustic singers. Persons of taste although ignorant of the rules of composition, have given us ballads full of openness, charming romances, and hymns of great beauty. The airs they have invented will remain; nature has dictated them. Some of the most pleasing and popular melodies are remarkable for the simplicity both of the music and of the words, which gives the singer a greater opportunity to display his feelings in the execution. Such are most national songs. (See Bard, Ballad, Song, &c.)

The chief excellence of that measured strain of music called air, resides in the beauty of its melody; the symmetry of which lays hold of our affections in a peculiar way. When addressed to the gentler pas-

sions, its tender expressions are more intelligible than words, of which few are necessary to assist its meaning; and the less it is cumbered with them, the more powerful is the charm. The words of the poet should be simple in their meaning and structure; otherwise the attention will be diverted, and the effect of the associated music will be lost. Melody demands the expression of its own thoughts, before it attempts to express the ideas of the poet. Its power of calling up ideas of the past on which the mind loves to dwell, is often a source of great delight. (See *To have in the* Ear.) With music of this kind, the singer seldom fails to please. He trusts to the charm of the melody, rather than the force of the words; recollecting that, 'We must first please the ear before we can touch the heart.' Each part of a harmonized composition has its own peculiar melody, its own proper subject or discourse, that unite as a means of enhancing the effect of the principal, which by way of eminence is called *the melody* or air. The lower the part, the greater are usually the intervals: thus, the base often moves by fifths or octaves. Each part should have sufficient melody to give it interest; but if the air is melodious, the other parts should not be such as to divert the attention.

MELOPŒIA, (Gr.) an ancient term denoting the art and rules of composition in melody. *(little used.)*

MELOS, (Gr. from *meli*, honey,) sweetness of melody; that quality by which a melody is made agreeable.

MENO, (Ital.) less; as *meno forte*, less loud; sometimes abbreviated into *men;* as, *men allegro*, less quick.

MESSA, (Ital.) mass. (See Mass.)

MESSA DI VOCE, (Ital.) applied to a sound

gradually increasing and then diminishing, or to the swell of the voice on a holding note.

MESTO, (Ital. sad,) in a slow melancholy style.

METER, the measure of lyric verses. The lines of lyric poetry are made up of several feet, which correspond with the measures of the music. There is one accented syllable in each foot, which occurs on the accented part of the measure. The following are the meters commonly sung in our churches.

I. Long Meter, consists of four lines in a verse, each containing four feet and eight syllables; as,

O, come, | loud an- | thems let | us sing,
Loud thanks | to our | almigh- | ty King;
For we | our voi- | ces high | should raise,
When our | salva- | tion's rock | we praise.

II. Common Meter, has four lines, the first and third line consisting of four feet or eight syllables, and the second and fourth of three feet or six syllables; as,

When I | can read | my ti- | tle clear,
To man- | sions in | the skies,
I bid | farewell | to ev- | ery fear,
And wipe | my weep- | ing eyes.

III. Short Meter, has four lines, first, second, and fourth of three feet, and the third of four feet; as,

Far as | thy name | is known,
The world | declares | thy praise;
Thy saints, | O Lord, | before | thy throne,
Their songs | of hon- | or raise.

The Long, Common, and Short Particular meters, are the same as the above with two additional lines, corresponding to, and immediately following the first and third.

IV. Hallelujah Meter, has usually eight lines, the first four each of three feet, and the last four

each of two feet or four syllables, the same as the word hallelujah; as,

The Lord | Jeho- | vah reigns,
His throne | is built | on high;
The gar- | ments he | assumes,
Are light | and maj- | esty;
His glo- | ry shines | No mor- | tal eye
With beams | so bright, | Can bear | the sight.

Sometimes, the last four lines are included in two, each of four feet.

The other varieties of meter are designated by the number of syllables in a line; as, 7s, 6s and 4s, 8s 7s and 4s, &c.

METRICAL, a term applied to music when it is divided into regular phrases, or when the words are metrical.

METRONOME, (Gr. *metron*, a measure, and *nomos*, a rule,) an instrument, which by means of a short pendulum with a sliding weight and set in motion by clock work, marks the time in which a composer intends a piece of music to be performed. A mark which is either a minim, crotchet, or quaver, is placed at the beginning of the movement, with figures annexed, as 𝅗𝅥 100, ♩ 70, ♪ 50, which correspond to the figures marked on the pendulum, to which the moveable weight is to be adjusted in order to vibrate the given number of times in a minute.

MEZZA, } (Ital.) half, middle, mean, somewhat;
MEZZO, } as, *Mezzo forte*, somewhat loud. (See DYNAMIC DESIGNATIONS.) When used alone, and applied to the grand piano forte, *mezzo* means that the left hand pedal is to be pressed down, by which one set of strings is removed from the hammers, and the tones are rendered softer.

MEZZA VOCE, with moderate strength of tone, and in a delicate and pleasing manner.

MEZZO CARATTERE, (Ital.) of a middle character; to excel in this style, the singer must be able to swell and diminish the notes, and to run easy divisions with neatness and precision.

MEZZO SOPRANO, (Ital.) a low species of treble, or a second treble voice. (See VOICE.)

MEZZO SOPRANO CLEF. (See CLEF, 5.)

MILITARY MUSIC, music for war. (See MARTIAL MUSIC.)

MIMES, a kind of vocal mimic actors, formerly very numerous in France.

MINIM, a half note. (See CHARACTERS 30, EX. 6.)

MINOR, (Lat.) less. (See CHORD, INTERVAL and MODE.) In intervals, the term *minor* is applied only to imperfect concords. (See MAJOR.)

MINORE, (Ital.) minor. (See MINOR.)

MINSTREL, this appellation was formerly given to a poet and musician, who wandered from place to place, singing verses in praise of some noble benefactor, accompanying himself on the harp or viol. Minstrels enjoyed peculiar privileges, and were often much noticed by kings.

MINSTRELSY, the art or profession of a minstrel.

MINUET, a slow dance or air of a graceful character in 3 : 4 time; minuets of a quicker kind were formerly used, as movements in overtures, sonatas, &c.

MINUETTO, (Ital.) a minuet.

MISERERE, (Lat. have mercy,) the first word of the the 51st psalm in Latin, usually called the 'Psalm of Mercy,' a hymn of supplication. The name is also applied to a composition with these words; as, Leo's *Miserere*.

MISSAL, the book containing the Roman catholic service, ordered by pope St. Gregory.

MIXED CADENCE, an imperfect cadence.

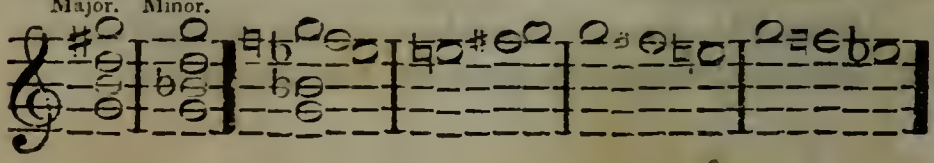
MIXED MEASURE, a compound measure, consisting of an even number of simple triple measures; as the 6 : 4 and 12 : 8 measures.

MIXTURE, a compound organ stop. (See ORGAN.)

MODE, a certain disposition of the tones and semitones of the scale, with respect to the tonic or key note. The mode is either major or minor, which derives its name from the essential interval of its principal or fundamental chord, viz. the third of the scale. (See CHORDS 31, and *Composition of*, pp. 77 and 78.) The major common chord, having the major third next the base, has a thrilling and cheering effect; while the minor, having the minor third next the base, has a soft and pathetic effect. This chord so frequently recurring in the minor mode, gives it a serious and delicate character; it is hence called by the Germans, the *moll* or soft mode. The major principal chord in the G scale, is exhibited in Ex. 1; and the minor principal chord in the same scale, in Ex. 2. Although the third is the only interval essentially minor in the minor mode, and the one which constitutes its peculiar character; yet the seventh and sixth of the scale *may* also be minor, Ex. 3; the former when it is not the leading note, and the latter when it does not immediately precede or follow the leading note; they are major in Ex. 4 and 5, and minor in Ex. 6. The seventh must be major when it ascends or leads to the key note, Ex. 4; in other circumstances, it may Ex. 5, or may not be Ex. 6, at the option of the composer. It is hence an error of most musical writers to say that in the descending scale, the seventh *must* be minor.

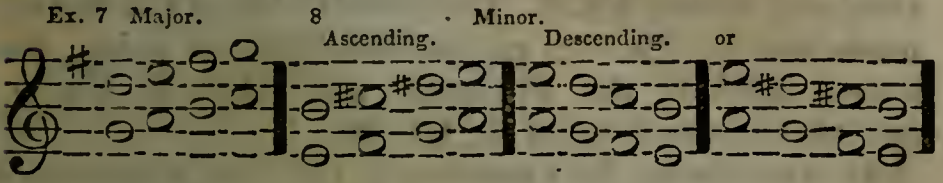
Ex. 1 2 3 4 5 6

Major. Minor.



To obviate the necessity of accidentals for the minor third, sixth, and seventh, the minor scale is taken a third below the major, which naturally makes these intervals minor, Ex. 8. When thus situated, the two scales are said to be related to each other; and the minor is called the relative to the major, and the contrary.

RELATIVE MAJOR AND MINOR SCALES.



MODERATO, (Ital) moderate; as a movement, it is rather quick than slow; it is also used adjectively, as *allegro moderato*, moderately quick.

MODERN MUSIC, music composed since the time of Handel. Of those who have been instrumental in introducing the modern style of music, Haydn stands at the head, both in order of time and in talents.

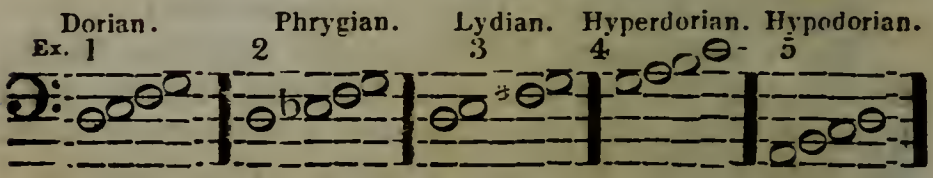
ALLA MODERNA, (Ital.) in the modern style.

ANCIENT CHURCH MODES, the different modes or scales of the Greeks and Romans, which differ from each other by the transposition of the tonic without introducing flats and sharps. The doctrine of the ancients respecting their several modes, is rendered obsure by the disagreement of their authors respecting the definitions, divisions, and names of their modes; and by the want of examples. The great scale of the Greeks appears to have been constituted of tetrachords, instead of octaves like the modern. These tetrachords consisted of four diatonic sounds, and differed from each other by the position of the semitone. In the tetrachord, the two extreme sounds were fixed, and hence called *soni*

stabiles; but the two intermediate sounds might be varied, and hence were called *soni mobiles,* (which see,) and thus three different tetrachords might be formed, which were the basis of the three original modes. 1. The *Dorian* which had the semitone between the 2d and the 3d, Ex. 1. 2 The *Phrygian* which had the semitone between the 1st and 2d, Ex. 2. 3 The *Lydian* which had the semitone between the third and fourth, Ex. 3. The lowest note of the Dorian mode was D, Ex. 1; and to avoid altered notes, the lowest note of the Phrygian was taken E, Ex. 8; and that of the Lydian F, Ex. 10.

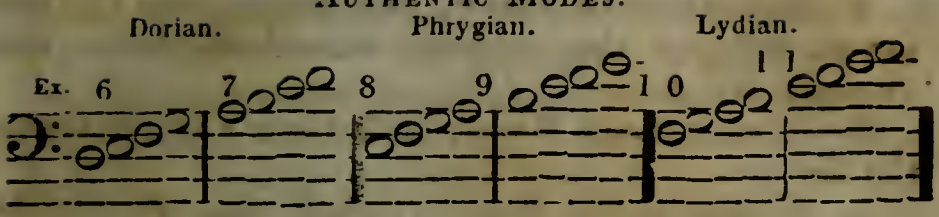
It was found, by experience, that two tetrachords might be combined either conjointly or disjointly. If conjoined to the principal tetrachord below, the term *hypo* was prefixed to the name of the mode; thus, Ex. 5 was called the *Hypodorian*: when joined above, *hyper* was prefixed; thus, Ex. 5 was called *Hyperdorian;* and so of the other modes. See Enumeration below.

ANCIENT GREEK MODES.



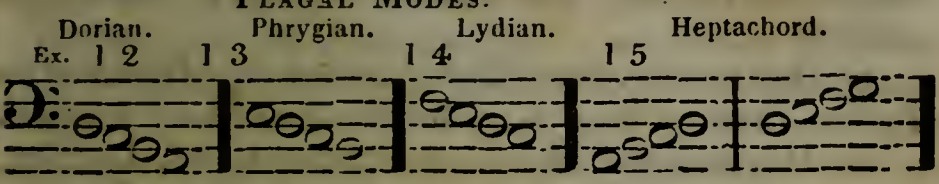
The two tones of the tetrachord were afterwards divided, and the intermediate semitones taken as the basis of two other modes, viz. the *Eolian* and *Ionian;* the highest note of the tetrachord was also made the basis of another mode, called the Mixolydian. Thus were formed the six principal modes. These six were called the *authentic* modes, and were extended upwards by annexing a disjoint tetrachord; thus forming what the Greeks called an octachord, corresponding nearly to our octave, Ex 7, 9, and 11.

AUTHENTIC MODES.



A conjoint tetrachord was also placed below the principal one, which constituted what was termed the *plagal* or imperfect modes. Ex. 12, 13, and 14.

PLAGAL MODES.



The tetrachord forming the plagal mode conjoined with the principal tetrachord, constituted the ancient *heptachord;* Ex. 15. The different modes were denominated from the different people who invented or adopted them. The following is an alphabetical enumeration of the different names, together with some of their characteristics.

1 AUTHENTIC OR PRINCIPAL MODES, were those in which the music was included between the tonic and the fourth or the octave above; and which ended on the tonic. Ex. 6, 8, and 10.

2 DORIAN MODE, the most ancient in Greek music, whose lowest note was D on the base staff, Ex. 6. The Dorian mode had a minor third next above its base, and hence nearly corresponded to our minor mode. Plato regarded this mode as peculiarly adapted to preserve good manners; for which reason, he permitted its use in his republic.

3 EOLIAN MODE, one of the more recent, supposed by some to have had its base in the middle of the upper tone of the Dorian tetrachord or mode; and by others on A, fourth line, base staff. Little is known of its character.

4 Hyperdorian Mode, had for its base G, the lowest note of the conjoint tetrachord above the Dorian. Ex. 4.

5 Hypereolian Mode, had its base a fourth above the Eolian.

9 Hyperionian Mode, called also *Hyperiastian*, and *sharp Mixolydian*, had its base a fourth above the Ionian.

7 Hyperlydian Mode, had its base a fourth above the Lydian, and was the highest of the Greek modes.

8 Hyperphrygian Mode, called also *Hypermixolydian*, had its base A, a fourth above the Phrygian.

9 Hypodorian Mode, sometimes called *Locrian*, was a fourth below and the plagal of the Dorian; and had for its base A on the first space base staff, which consequently was the same as the *proslambanomenos*, the lowest note of the ancients, Ex. 5. This mode is said to have been invented by Philoxenes, and was the lowest mode in use.

10 Hypoeolian Mode, was a fourth below and the plagal of the Eolian.

11 Hypoionian Mode, called also *Hypoiastian*, was a fourth below, and the plagal of the Ionian.

12 Hypolydian Mode, was a fourth below and the plagal of the Lydian; and had for its base note C, second space base staff, Ex. 14. This mode was peculiar to funeral songs, and to sublime and sacred poetry.

13 Hypomixolydian Mode, was a fourth below and the plagal of the Mixolydian, and had D for its base note the same as the Dorian, Ex. 1.

14 Hypophrygian Mode, was a fourth below and the plagal of the Phrygian; and had for its base note B, second line base staff, Ex. 13. It is said to have been invented by Damon.

15 Ionian Mode, one of the more recent of the ancient Greek modes; whose base note like that of the Eolian, is somewhat doubtful: some suppose it to have been in the lower tone of the Doric tetrachord or E flat, while others place it on C.

16 Lydian Mode, the third of the ancient modes, based on F the base clef note, Ex. 10; though some place it on E sharp, and the Eolian below it. As it bore the name of an Asiatic people, it was sometimes called the *barbarous* mode. From the reputed character of this mode, however, we conclude it was based on F, and had A its third major. Its character was striking and animated, yet highly capable of pathos and softness. It was for this latter quality, that Plato banished it from the republic. This is the mode by which Orpheus is fabled to have attracted the very beasts, and Amphion to have built the walls of Thebes. Some impute its invention to Amphion the son of Jupiter and Antiope, others to Olympus, and others to Melampides. Pindar informs us, that it was first used at the marriage of Niobe, the daughter of Tantalus king of Lydia.

17 Mixolydian Mode, same as the Hyperdorian, was based on G above the base clef, and was the most acute of the principal Greek modes.

18 Phrygian Mode, the second of the principal modes, which had, for its base note, E next below the base clef, Ex. 8; and after the Dorian it was the most ancient. It was called the Phrygian, because invented by the Marsyas a Phrygian. The character of this mode was bold, impetuous, and vehement to a degree perfectly terrific. In it the trumpet and other wind instruments were used.

19 Plagal or Secondary Modes, are the same as the *hypo* modes; in which the music was chiefly included between the tonic or base note of the prin-

cipal mode, and the fourth or dominant below, on which it always ended.

Respecting these ancient modes, it must be observed that the ancient octave did not consist of twelve semitones like the modern, but only of the eight principal notes of the scale. The only accidental they allowed was B flat, which was used only temporarily. When, therefore, a piece was composed in any other than the natural scale of C, no flats or sharps could be used to render it like the modern transposed scales; but each key or mode differed from every other, by the different situation of the two natural semitones. This is the clearest notion we can obtain respecting the ancient modes so far as relates to pitch and construction: but they had still other differences which characterize them more particularly with regard to expression. These were drawn from the kind of poetry set to music, from the nature of the instrument to accompany it, from the rhythm and cadence, and from the form which certain airs assumed among the different nations from which the names of the principal modes were originally derived: Doris, a country in northern Greece, Ionia and Æolia, on the western part of Asia Minor, and Lydia adjoining, and Phrygia farther east, countries settled by the Greeks.

MODES OF VIBRATION, the different ways by which a string or pipe may be made to vibrate in the production of harmonic sounds.

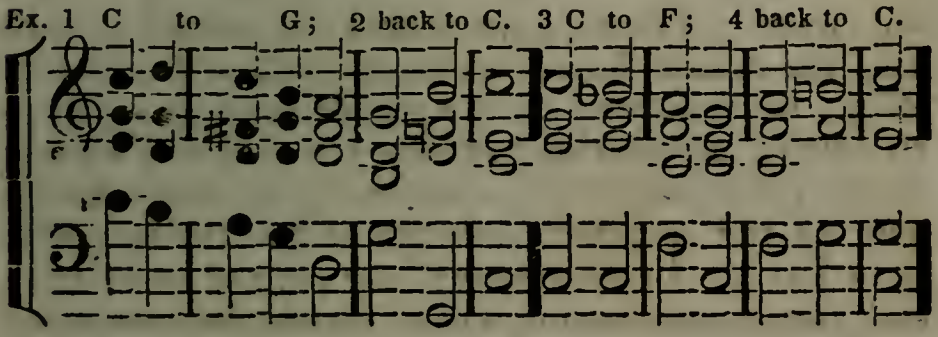
MODIFICATION, a term applied to the temperament of the sounds of those instruments whose tones are fixed. (See TEMPERAMENT.)

MODULATION, a transition from one key to another, according to certain rules, during the course of a movement. Every piece of music has its principal or governing key. With only the natural

chords of this key, a great variety of music may be performed; but in a long continued piece, the ear becomes satiated, and requires a variety of key. The fundamental note and chord occurs so often, that it seems to pervade the whole composition, and must therefore be changed. This change is called *modulation;* which cannot be effected without chromatic intervals. There is one essential note which must always be altered to produce the change of key, called the *note of modulation*, (which see.) The key most naturally modulates into that whose key note is next to the tonic, the most important of the scale. (See HARMONY, p. 171.)

The first relative major key, which takes 5 for its tonic, has 4 sharped as its note of modulation, because ♯4 is the leading note to 5, and is required in its scale, Ex. 1. (See TRANSPOSITION.)

MODULATION TO 5; TO 4.

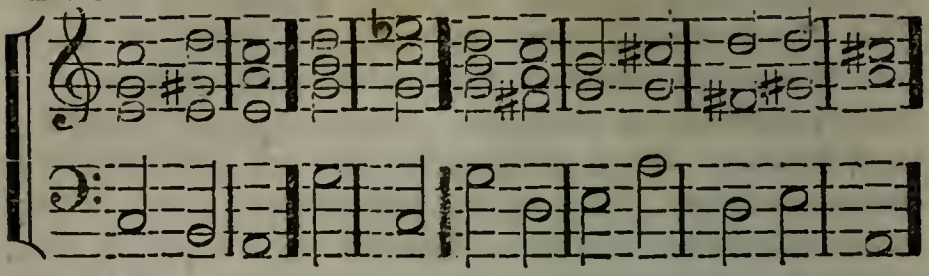


The second relative major key, which takes 4 for its tonic, has flatted 7 for its note of modulation, because ♭7 is necessary either for the dominant seventh, or for 4 of the new key, Ex. 3.

The relative minor key has sharped 5 for its note of modulation, which leads to 6 the tonic of the minor, Ex. 5. The tonic minor key has flatted 3 for its note of modulation, which is necessary for the minor scale. (See MODE.)

To 6 minor. To tonic minor. To remote key, A.

Ex. 5 6 7

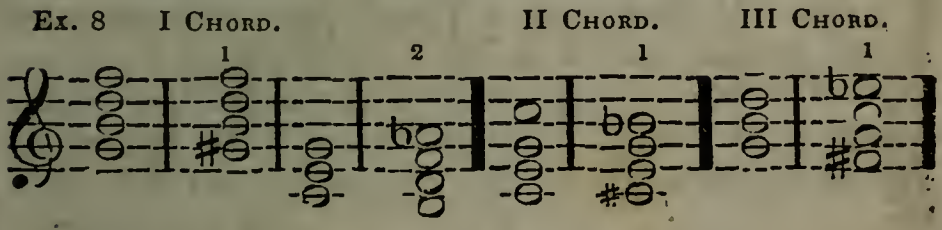


In temporary modulations, such as occur in most psalm tunes, a contrary modulation introduced in a similar manner, subsequently takes place, to restore the tune to the original key ; and the new note of modulation is the same as the previous one, with the sign of restoration ♮ commonly prefixed, Ex. 2, & 4.

These are the only modulations ordinarily introduced into music. Such a gradual and almost insensible evolution of harmony is sufficient for the composer's end. At other times, a bold and sudden change into the remote keys, can alone produce the desired effect. In modulations to the remote keys, some sharped note of modulation commonly is used as a leading note to the new key, as in Ex. 1 ; or some flatted note as the dominant seventh or 4 of the new key, as in Ex. 3. In modulating, the note of modulation and the accompanying chord should be previously used, in order to prepare the ear for the new key. They are seldom omitted by the best composers ; and their omission is severely censured by Haydn ; who says, ' Composers in modulating, should avoid tumbling head foremost with the door into a room, when it is in their power to enter it with politeness and decency.' If the key is remote, the notes of modulation of the intermediate keys, ought to be heard as in Ex. 7, and by flats, Ex. 10, p. 55 ; unless

the change is made by means of the chord of the diminished seventh, Ex. 12, &c. or superfluous fifth, Ex. 22 and 23. By using a series of avoided cadences, (see Ex. 10, p. 55,) we can successively modulate into every key of the scale. But abrupt modulations into remote keys, to produce a particular effect, are now more generally made by means of the diminished seventh, which is an equivocal chord, (See CHORDS, 15, p. 85.) In every scale, there are three and only three different chords of the diminished seventh, Ex. 8.; which, by the different forms they are capable of assuming, Ex. 9, 10, and 11, without changing their practical character on keyed instruments, may lead directly to the tonic chord or one nearly related to the tonic of every possible key. The following are the three chords of the diminished seventh in the key of C; with the natural chord prefixed to each which most easily leads to it.

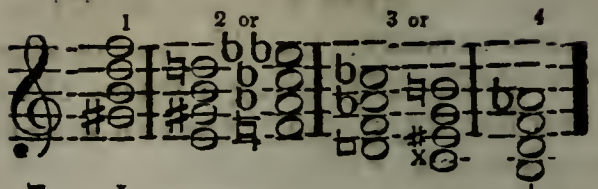
CHORDS OF THE DIMINISHED SEVENTH.



These three chords embrace every semitone of the scale. In C for instance, the I Chord embraces the 2d, 5th, 8th, and 11th semitones; the II Chord the 1st. 4th, 7th, and 10th; and the III Chord the 3d, 6th, 9th, and 12th.

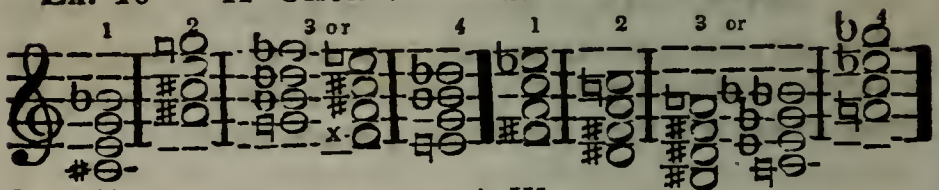
By changing the form of these four chords, without changing the semitones of which they are composed, otherwise than by taking some of them an octave higher or lower, we get all the diminished sevenths in every key used in modern music.

Ex. 9 I Chord.



Key of C	or		I	-	-	-	-	I
" G	"	1♯	II	-	-	-	-	-
" D	"	2♯s	III	-	-	-	-	-
" A	"	3♯s	I	I	-	-	-	-
" E	"	4♯s	-	II	-	-	-	-
" B	"	5♯s	-	III	-	-	-	-
" F♯	"	6♯s	-	I	-	-	I	-
Key of G♭	or	6♭s	-	-	I	I	-	-
" D♭	"	5♭s	-	-	-	II	-	-
" A♭	"	4♭s	-	-	-	III	-	-
" E♭	"	3♭s	-	-	-	I	-	I
" B♭	"	2♭s	-	-	-	-	-	II
" F	"	1♭	-	-	-	-	-	III

Ex. 10 II Chord. 11 III Chord.



C	II	-	-	-	-	III	-	-	-	-
G	III	-	-	-	-	I	I	-	-	-
D	I	I	-	-	-	-	II	-	-	-
A	-	II	-	-	-	-	III	-	-	-
E	-	III	-	-	-	-	I	I	-	-
B	-	I	-	I	-	-	-	II	-	-
F♯	-	-	-	II	-	-	-	III	-	-
G♭	-	-	II	-	-	-	-	-	III	-
D♭	-	-	III	-	-	-	-	-	I	I
A♭	-	-	I	-	I	-	-	-	-	II
E♭	-	-	-	-	II	-	-	-	-	III
B♭	-	-	-	-	III	I	-	-	-	I
F	I	-	-	-	I	II	-	-	-	-

The numerals at the right hand of each key, denote the kind of diminished seventh that the chord under which it is placed forms in that key, as marked in Ex. 8 and explained below. Thus, against Ab or 4bs, we find III under the chord I, which denotes that that is the third diminished seventh, or 4♯, 6, 8, and 3b in that key. To obtain, in the most natural manner, the three diminished sevenths in any key;

I. *First form*, having the dominant seventh, we take the same chord with the dominant sharped, or 5♯, 7, 2, and 4; as in Ex. 8, I, 1; in which 5♯ is the base of the direct chord.

I. *Second form*, having the tonic chord, we take the diminished seventh on the leading note, or 7, 2, 4, and 6♭; as in Ex. 8, I, 2.

II. Having the tonic chord, we take the tonic sharp and the seventh flat, or 1♯, 3, 5, and 7♭; as in Ex. 8, II; in which 1♯ is the base of the direct chord.

III. Having the tonic or dominant chord, we take the diminished seventh on the sharp fourth, or 4♯, 6, 8, and 3♭; as in Ex. 8, III.

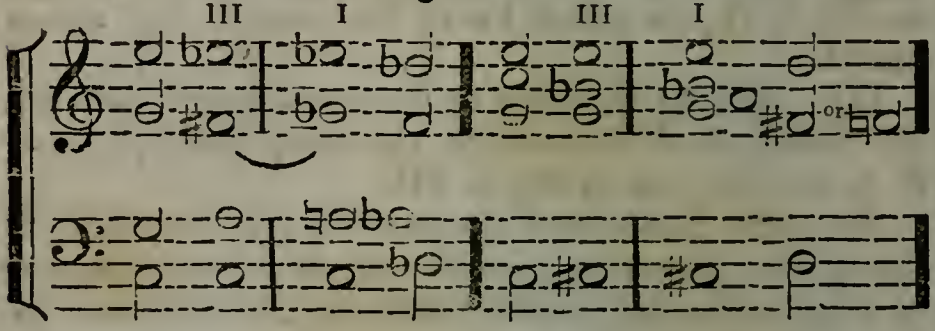
As each diminished seventh in any one key, is found with the same or different numerals annexed in every other key, it is evident we can modulate by either diminished seventh into every other key. To modulate *directly* into any required key, without any intervening chord but the diminished seventh, we must assume that chord in the given key which is marked I in the key to which we would modulate. Thus, to modulate from C to A♭, we must take that seventh in the C scale, which is in the same Class with I in the A♭ scale; viz. II, as is shown in Ex. 10. See Ex. 19.

In the following examples, we modulate from C, by taking the proper diminished seventh; and changing without altering their position in the semitonic scale, such note or notes as are necessary to form the diminished seventh in the required key; which is sometimes called the enharmonic change. By altering one of the notes of the latter, so as to form the dominant seventh, or some other powerful leading interval in the succeeding scale, the ear held in suspense by the equivocal chord, at once anticipates the

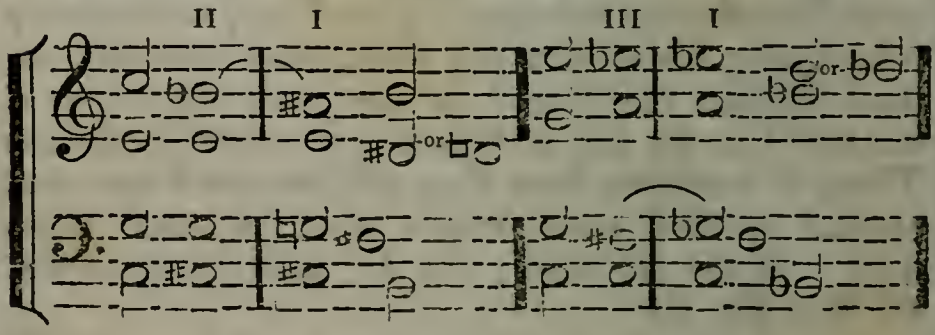
conclusion. This anticipative note, in the following examples, is indicated by the semibreve following the minim in the chord of the diminished seventh. The chords are in most instances inverted, in order to give a good movement to the base; which most satisfactorily but not necessarily takes the leading note, or the supertonic.

MODULATIONS BY THE DIMINISHED SEVENTH.

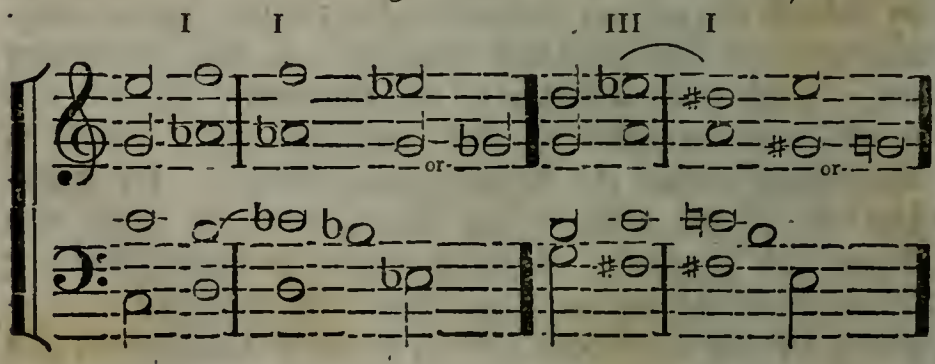
Ex. 12 C to D♭. 13 C to D. minor.



Ex. 14 C to B B minor. 15 C to B♭. minor.

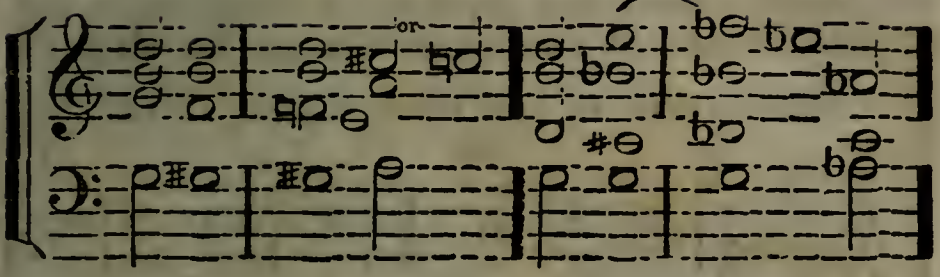


Ex. 16 C to E♭. minor. 17 C to E, E minor.



Ex. 18 C to A. A minor. 19 C to A♭.

I I or II I



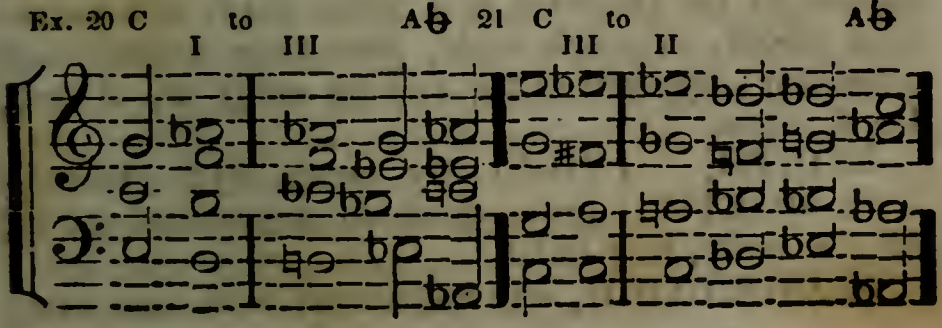
The other keys need no examples.

In the same manner, we can modulate from any other key as well as C, or modulate back to C in the examples, by taking the corresponding chords in those keys. Thus, to modulate from any key to one a semitone above, we may proceed by making the tonic the leading note of the new key, as in Ex. 12; and to one a major seventh above or a semitone below, by making the tonic sharped the supertonic of a new key, Ex. 14.

By using *intermediate* chords, we can modulate from any given key, by means of either of its chords of the diminished seventh, to any other key. Thus, to modulate from C to A♭, if instead of the II chord in C, we take the I chord, which becomes the III chord in the A♭ key, we are brought to the dominant chord in the latter, Ex. 20. In the same manner, the III chord in C, leading to the II chord in A♭, resolves into the supertonic chord of the latter, Ex 21.

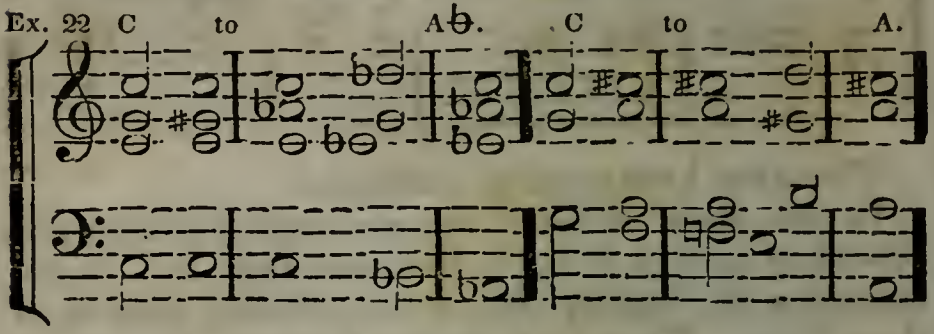
Ex. 20 C to A♭ 21 C to A♭

I III III II



The equivocal chord of the superfluous fifth, which divides the octave into three major thirds, may, in a similar manner, be used in modulating. Ex. 22 & 23.

MODULATION BY THE SUPERFLUOUS FIFTH.



This chord is essentially harsh and disagreeable, and hence but little used: though, for particular purposes, its construction and resolution would appear to justify its introduction.

ABRUPT MODULATION takes place, when a key is introduced which is far distant from the principal; or introduced without previous notice by the note of modulation.

ENHARMONIC MODULATION takes place, when a sharped note in one chord is treated as the next note above, flatted in the next chord, and the contrary. Ex. 12, 14, &c. above.

NOTE OF MODULATION, the flatted or sharped note which indicates a change of key.

MOLL, (Ital. *molle*,) soft, mellow, sweet; a term applied by the Germans to a minor third, minor common chord, or minor scale, from their delicate soft character; opposed to *dur* (which see;) as, *A moll*, for A minor.

MOLTO, } (Ital.) very much, in a great de-
DI MOLTO, } gree, denoting augmentation; as, *allegro molto*, very quick.

MONOCHORD, an instrument with one string

attached to a screw, and a movable bridge placed on a flat sounding board, employed to determine the mathematical proportions of sounds and intervals. It may be conveniently tuned to double C. The two ends and the bridge should have a well defined edge, so as to produce a distinct sound. The interval between the ends should be divided into aliquot parts as in the following table, to correspond with the harmonic intervals. A monochord is a convenient instrument to assist in tuning a piano forte or organ, or for marking the place for the stops or frets on a violin, violincello, guitar, &c. By shortening the string 1 : 3d, or by placing the bridge or the finger, at the distance of one third from one end to the other, the remaining part of the string will give a fifth to the original note; and so in proportion for the other distances, as in the following table.

1 : 16th, a semitone;	1 . 3d, a perfect fifth;
1 : 10th, a minor tone;	3 : 8ths, a minor sixth;
1 : 9th, a major tone;	2 : 5ths, a major sixth;
1 : 6th, a minor third;	4 : 9ths or 7 : 16ths, a flat 7th.
1 : 5th, a major third;	7 : 15ths, a sharp seventh;
1 : 4th, a perfect fourth;	1 : half, an octave.

(See STRINGS, and *Theory of* INTERVALS.)

MONODY, (Gr. *monos*, one, and *ode*, a song,) a piece of music for one voice only; a funeral ditty.

MONOTONOUS, (Gr. *monos*, one, and *tonos*, a tone,) an epithet applied to an instrument which produces but one tone, as a drum, or drone base. The term is also applied to music continuing on the same key, or which is too repetitious. The two extremes of monotony and excessive variety, are to be avoided.

MOOD, (See MODE.)

MORDENTE. (See ORNAMENTAL NOTES.)

MORENDO, (Ital *morire*, to expire,) gradually decreasing in sound, until it dies away.

A MORISCO, in the style of a Moorish dance; a term found in connexion with old English ballads.

MORRICE DANCE, a dance derived from the Moors, in which bells are jingled, and swords clashed.

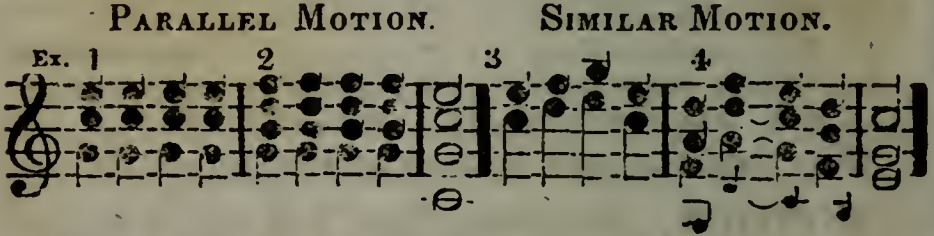
MOSSO, (Ital.) animated, moved, somewhat faster.

MOTET, a name formerly given to elaborate vocal compositions consisting of several parts, whose subject was usually sacred; the Latin hymns of the Romish church.

MOTETTO, (Ital.) motet. *Motetto* in sacred music is nearly the same as *cantata* in common music.

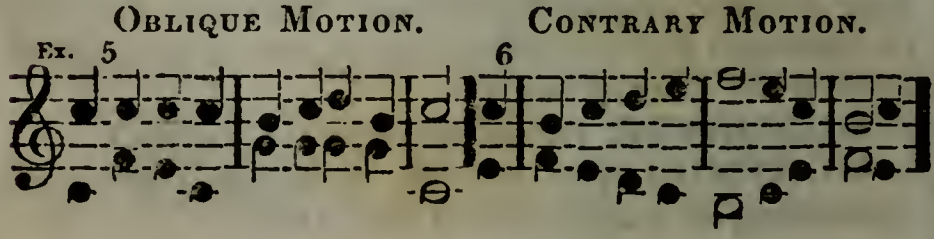
MOTION, a term applied in harmony to the comparative progression of the parts. The four principal motions, are *parallel*, *similar* or *direct*, *oblique*, and *contrary*.

I. Parallel Motion consists of a succession of notes in each of two or more parts, on the same degree of the staff. Ex 1 and 2.



II. Similar Motion takes place, when the parts ascend or descend together. Ex. 3 and 4.

III. Oblique Motion takes place, when one part ascends or descends while the other remains stationary. Ex 5.



IV. Contrary Motion is produced when one part ascends while the other descends.

The various motions may be combined together. They are intended to give to a musical composition, variety, strength, and character, and to avoid consecutive fifths and octaves. The danger of the latter is only in similar motion; as in Ex. 4, the small notes below move in octaves to those of the middle part, and in fifths to the lower part. (See Base, pp. 44, 45, and Consecutive.)

MOTIVO, (Ital. motive,) the leading subject or predominant passage of a fugue or air, with which it usually commences.

MOTO, } (Ital. motion,) with agitation, for-
Con MOTO, } cible and emphatic; often annexed to another word indicating the movement; as, *andantino con moto.*

MOTO CONTRARIO, (Ital.) contrary motion.

MOUTH HOLE, the opening of a flute and other similar instruments, to which the mouth is applied while playing on the instrument. (See Embouchure.)

MOUTH PIECE, a silver or brass appendage, inserted at the end of the tube of a horn or trumpet, to convey the air to the instrument, and to receive the pressure of the lips in performance.

MOVEMENT, a term applied to each of the separate divisions of a composition, which is distinguished from the others by being in different time or variety of measure. When the time changes, the movement is changed. There are five principal degrees of movement in which strains of music are performed; thus distinguished, from slow to quick, by the Italian terms:

I. Largo, very slow and heavy.
II. Adagio, slow and expressive.
III. Andante, middle time.

IV. Allegro, quick.

V. Presto, very quick. (See these words.)

The terms *largo* and *adagio*, are often used rather to express the style of performance than the velocity of the movement; hence authors disagree in their relative position, some placing adagio before largo. *Grave*, is sometimes used to denote the slowest time, but rather expresses the style than the movement.

These five different movements are modified, or intermediate and extreme ones are introduced, which are denoted by the change of termination of the several terms. When a movement is desired somewhat *less* characteristic than the above terms denote, the Italian *diminutive* terminations, *ino*, *ello*, and *etto*, are used. Thus;

Larghetto, slow, but less so than *largo*.

Andantino, somewhat gentle and distinct.

Allegretto, not quite so lively as *allegro*.

When a movement of a *most* striking character is desired, the Italian *superlative* termination, *issimo*, is used. Thus; [*used.*)

Adagissimo, the slowest of all movements. (*little*

Allegrissimo, very quick. *(little used.)*

Prestissimo, as quick as possible.

As to the absolute time of these several movements; in the *allegro*, the parts of the measure nearly accord with the vibrations of the second pendulum or the beatings of the pulse; and in the *largo* and *adagio*, about as slow again. These times, however, are performed much slower in the church, than in the concert room or in private circles and social entertainments. Nothing is more essential to the due performance of music, than adjusting the time to the intention and meaning of the author. Many performers, at the present day, are guilty of a great mistake in playing modern music too fast; erroneously

supposing that quickness is necessary to distinguish it from old; or they have a propensity to hurrying the movements beyond their natural pace, for the purpose of showing their dexterity. Having shown the importance of fixing on the right time; we add, that for points of taste and expression, it may occasionally be broken, that is, *accelerated* or *retarded;* which instances are marked by the terms;

ACCELERANDO, hastening, going faster and faster.
RITARDANDO, } retarding, going slower and slower.
LENTANDO, } (See these terms.)

Some of the most striking effects of music are produced by the change of time. 'The slow naturally leads to sorrow, but the gay and lively excites a joy in us.' Destroy the time or thwart the measure, and you rob the strain of its interest and charm. The less we are made sensible of any thing mechanical in giving or keeping the time, whether by the hand, the bow, gesticulation, or otherwise, the more fully will the effect of the melody and harmony be allowed to operate, and the more deeply will the mind be penetrated with the feelings to be awakened.

MUSA, (Lat. and Ital.) a muse, or patron of music and the other liberal arts; a song, a poem.

MUSARS, itinerant performers on the *musette*, formerly very numerous in Europe.

MUSETTE, a small instrument of the bagpipe species; also, a pastoral air composed for that instrument.

MUSIC, a pleasing combination or succession of sounds, constituting one of the fine arts. The name is supposed to be derived from the Greek *mousa*; Latin *musa*, a muse, because the invention of the art was attributed to the Muses, daughters of Jupiter and Mnemosyne, and patronesses of music and poetry and the other liberal arts. Others derive the name

from the Egyptian word *moys*, water, because music was invented or at least improved near the marshes of the Nile; and this invention or improvement was occasioned by the reeds which grew there in great abundance, through which sounds were produced by the wind blowing into them, and of which at first they made their instruments. Others again imagine that the first ideas of music were received from the warbling of birds. However this may have been, it appears more rational to attribute its origin to man, since musical intonation is the natural result of joyous emotions; and since also we find, that wherever there is speech, there is song. Tradition assigns the origin of vocal music to the same invention as instrumental; but from its nature, as spoken of above, we have no reason to believe that the Garden of Eden was a stranger to 'singing and the voice of melody.' In pursuing this subject, we shall first give a brief outline of the,

History of Music. As we have said, vocal music doubtless had its origin in Paradise; but when sin entered into the world and brought with it sorrow, the heart lost its elasticity, and needed some outward excitements to call forth its song of praise. Hence the invention of instrumental music, which is assigned in scripture to Jubal, a descendant of Cain. 'He was the father of all that handle the harp and organ;' Gen. iv. 21. This passage contains the whole of our information respecting the state or progress of music before the flood. Six hundred years after the flood, we learn, by a casual circumstance, that it was customary in Syria to celebrate any important event, 'With mirth and with songs, with tabret and with harp;' Gen. xxxi. 27. Many centuries subsequently, we are introduced to the first specimen of a choral hymn of praise either in profane or sacred story; Ex. xv. It

was sung antiphonally by Moses and the men on the one hand, and by Miriam and the women on the other, accompanied with instruments and the dance, according to the usage of the Egyptians. One fact is deserving of particular notice; that in the early history of all nations, their first musical attempts were devoted to religious purposes. The Egyptians were so jealous of its sacred application, that as soon as it became corrupted, they made a law to forbid their children learning this science. For proof of the scrupulously sacred character of music among the Jews, and for a history of music in the Jewish church, see La Trobe's "Music of the Church." We learn from scripture, that in the reign of David, the 'sweet singer of Israel,' singers, lyrists, and other musical performers were employed in the service of the temple. The Jewish harp, we are told, was mounted with a considerable number of strings; and David, it appears, was the best lyrist of his time. But to what stage of improvement, music as a science had then arrived, we have no satisfactory information. It is evident, however, as we learn from 1 Sam. xvi. 23, that its effects were very great. Of the importance of sacred music, one fact is worthy of observation. During those turbulent times which succeeded the reign of Solomon, we learn from history, that the few kings who 'walked in the ways of David,' sought to redeem music from its previous desecration. A zeal for the Lord of hosts ever displayed itself in the renovation of the music of the temple.

The progress made in Egypt in the science of music, we have not the means of ascertaining. From Egypt it was introduced into the congenial soil of Greece, where it underwent a great improvement; which must be regarded as an epoch in its history. By the Greeks also, music was originally held sacred;

as well as by the Romans, who derived theirs from the Greeks: and it is remarkable, that whenever their songs were debased, their manners were corrupted. During several centuries, the Greek music was confined to vocal performances. The early Grecian poets sung their own compositions, assisted by a lyre. (See LYRE.) It is to be observed, that the music of this early period, and during the first ages of the church, seems to have been little more than an arbitrary and extempore application of sounds to syllables, with hardly any other restraint than attention to rhythm and accent. This unshackled species of music may be well calculated to accompany poetry, when committed to a solitary performer; who, accommodating every tone to the natural play of the passions, may be conceived, especially on subjects of intense interest, to have had an influence totally unknown to our more ingenious and elaborate compositions. Our modern music, chained down as it is to artificial rules, which restrain the natural fervor, and often make the thought subservient to the sound, cannot be expected so powerfully and spontaneously to operate on the feelings. And yet how effective soever this recitative style for an extempore and dramatic performance, certain it is, that it never could be adapted for a varied and indiscriminate chorus. Such, however, seems to have been the music of the primitive christians: nor have we any reason to imagine that the strains, which called for the rapturous expressions of St. Augustine, had acquired any melody and harmonious combination. (See CHANT.) (For further information respecting the Greek and early Roman music, see SCALE, NOTATION, *Ancient* MODES, &c.)

To the time of Gregory, the ancient music appears to have undergone no change deserving of notice.

Gregory devoted himself sedulously to its improvement. He adopted the Roman characters, instead of the Greek : (see NOTATION.) He introduced a new species of chanting, termed from its gravity, *Canto Fermo*, in which the notes were all equal in length as in our choral music, or at least of no stated measure, as in our cathedral service. (See CHANT.) Hence he totally destroyed the rhythmical character which had designated the chant for so many centuries, and hesitated not to sacrifice mere effect to concord and solemnity. (See Burney's "History of Music.")

Strange as it may seem, despite of the variety of instruments and voices, we have no evidence, that prior to the eleventh century, there existed any knowledge of performance in parts, or harmony ; but all, with slight exceptions, consisted in performing in unisons or octaves. It is to this period also, that we are to trace the commencement of other improvements, which are the foundation of the modern system of music. For these we are chiefly indebted to Guido, a benedictine monk, born at Arezzo in Tuscany, about 990. From the time of the reform by Gregory to this period, many attempts had been made to improve the musical notation ; and it is now difficult to decide, with accuracy, how much credit is due to Guido. It appears that about 1022, he was instrumental in giving the musical scale the form it now retains. (See SCALE and NOTATION.) Previous to the introduction of counterpoint, we learn, that when the voice was accompanied with an instrument, a minor third near the close of an air was sometimes taken ; and also holding notes were employed below the vocal melody. This method was next adopted in singing without the instrument ; hence the origin of the word *descant*, meaning double chant. Out of

these grew counterpoint or harmony; which Guido was instrumental in reducing to a system, that has undergone gradual improvements to the present time. When instruments and voices began to move in parts, there was felt a necessity for a stricter time; hence the gradual invention of the different kinds of notes. (See NOTATION.) To render the calculation of the corresponding values of the notes easier, *bars* were introduced enclosing as many notes of the score as would agree with one note of great duration, as a *long*; thus, the measure originally included as much as four or eight of our measures. The first works known to be printed with bars, were published in 1600, though bars were not generally adopted until a hundred years afterwards.

From the time of Gregory and Guido, *Italy* was the source of music. But during the middle ages, while Italy was the theatre of war, or from the thirteenth to the sixteenth century, the most important improvements in the art, were due to the Flemish and the French. The former people merit peculiar consideration, as having formed, during the last half of the fifteenth century and the first part of the sixteenth, a school, which though broken up by the wars, was nevertheless the source of all the schools now subsisting in Europe. The French were the first who participated in the impulse they had given; and subsequently Italy was filled with French and Flemish professors and singers. About the middle of the sixteenth century, the schools of Italy again began to appear on the scene. The most ancient is that at Rome, with Palestrina at its head. Since their revival, these schools have attained a superiority in almost every kind of music. It is in Italy, that the various branches of sacred music, from the ancient chant to the most highly ornamental

style, have been successively developed. The traits which characterize all the Italian schools, are a nice feeling and profound knowledge of the art, united to grace and expression. In musical execution, the schools in Italy have ever retained a marked superiority.

The origin of the *German* schools is as ancient as that of the Flemish; but for a long time, they were greatly inferior to the Italian. The Germans are less scrupulous in the design than in the coloring of their music. They prefer those chords whose effects are the most brilliant; and those instruments which are the most sonorous, such as wind instruments. They have never equaled the Italians in melody; but with regard to instrumental music, the Germans can boast a decided superiority. As to church music, the Germans have composed some peculiar pieces in several parts, that they call *chorals;* which are sung by the congregation, and have a very fine effect. It is to be regretted that other nations do not imitate it. In the accompanied and concerted style of church music, they have long possessed the finest works of the best writers; such as the masses of Graun, Haydn, and Mozart. They also possess oratorios of the greatest excellence, such as Handel's 'Messiah,' and Haydn's 'Creation.' The Germans do not appear to excel in fugitive pieces; that style requiring a simplicity and purity of melody little known among them. The German school derives its greatest lustre from its instrumental music. The culture of music in Germany is astonishing. Even down to charity schools, the art is publicly taught. No schoolmaster is allowed to exercise his profession, unless he is capable of teaching at least the elements of music, and some instruments. In the principal towns, there are public schools, to which any one is admitted,

where all the parts of composition are taught. From such causes, it follows, that the musicians in Germany are numerous and well informed. (See ORGAN, &c.)

For an examination of the

EFFECTS OF MUSIC, particularly vocal, see the Introduction to the "Manual of Instruction;" and Nathan's "Essay on Music," and EXPRESSION.

For the

PRINCIPLES OF MUSIC, *and their application*, see the various articles in this work; such as, HARMONY, BASE, MELODY, CHORDS, SOUND, &c. &c.

MUSIC OF THE SPHERES. (See HARMONY OF THE SPHERES.)

ANCIENT MUSIC. (See ANCIENT MUSIC.)

INSTRUMENTAL MUSIC, music for instruments.

VOCAL MUSIC, music for the voice.

MUSIC MASTER, a teacher of the principles and practice of music.

MUSIC PAPER, paper traced with staffs on which to write music.

MUSICA ANTIQUA, (Ital.) ancient music.

MUSICAL, appertaining to or concerning music.

MUSICAL ACADEMY, an establishment whose object is to teach the theory and practice of music to young people.

MUSICAL CYCLOPEDIA, a musical dictionary in which the science and practice of music are developed.

MUSICAL DICTIONARY, a book containing an explanations of musical terms and words relating to music, arranged in alphabetical order.

MUSICAL EAR. (See *Musical* EAR.)

MUSICAL GLASSES, (see HARMONICA,) a set of glasses tuned to the notes of the diatonic scale, and played by rubbing a wet finger round their brims. The tones are uncommonly sweet, and may be swel-

led and diminished or sustained at pleasure. Mr. Pickeridge of Ireland was the first who thought of producing tunes from glasses. Dr. Franklin availing himself of the hint, and improving on the previous examples, formed of glasses a very meliffluous instrument which he named *Armonica.* The glasses for this instrument are hemispherical, of such thickness and dimensions as to produce their respective sounds, and have each an open neck or socket in the middle. The largest glass is tuned to G above the base clef; and the highest G in altissimo; comprehending three octaves.

MUSICAL INSTRUMENTS. (See INSTRUMENTS.)

MUSICIAN, one who understands the science of music, and who sings or performs on an instrument according to rule. There are three kinds of musicians; first, the *speculative* musician, who contemplates and writes on the laws of sound and harmony; second, the *composer*, who produces music according to those laws; third, the *performer*, who with his voice or instrument executes the music. Distinct as are these provinces, they are sometimes embraced by the same individual, and with a success that evinces the affinity between speculative knowledge, practical invention, and vocal or manual execution.

MUTATION, a term applied to the changes which in certain cases were anciently made in the names of the syllables *ut*, *re*, *mi*, *fa*, *sol*, *la.* Such mutations being very intricate and useless, have become obsolete. The Greeks had mutations in the genus, in the system, in the mode, in the rhythm, and in the melopœia.

MUTE, a small utensil made of brass, wood, or ivory, to be placed on the bridge of a violin, &c. for the purpose of deadening or interrupting the vibrations of the sound.

N.

NAKED, a term applied to fourths, fifths, and other intervals, when unaccompanied.

NASAL, tones are nasal when the passage of the air through the nose is intercepted.

NATURAL. (See CHARACTERS, 31, Ex. 26.)

NATURAL CHORDS. (See CHORDS.)

NATURAL HARMONY, harmony consisting of such essential and chiefly common chords as belong to the key, in opposition to discordant or artificial harmony.

NATURAL KEY, the key of C and its relative minor A, whose signature has neither flat nor sharp.

NATURAL MUSIC, music produced by the natural organs, as the voices of men and birds, in distinction from artificial music or that performed on instruments.

NECESSARIO, (Ital.) same as Obligato.

NECK, that part of a violin, guitar, &c. extending from the head to the body, to which the finger board is fixed.

NINETEENTH, and NINTH. (See INTERVAL.)

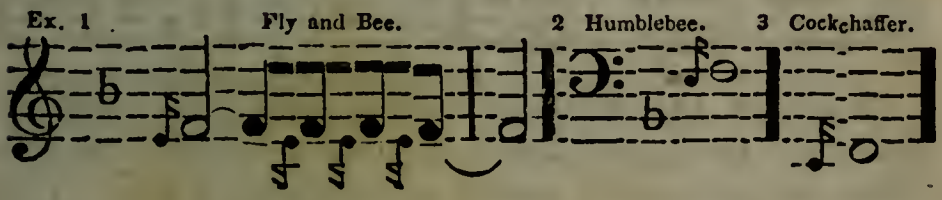
NODES, } the fixed points of a sono-
NODAL POINTS, } rous chord, at which it divides itself, when it vibrates by aliquot parts and produces the harmonic sounds; as the strings of the Eolian harp.

NOELS, (Fr. *noel*, christmas,) christmas carols, formerly sung by the French in their country churches at christmas. The airs were of a pastoral character, and the words simple, such as the shepherds

were supposed to have sung as going to pay homage to the infant Jesus in the manger.

NOISE, a sound produced by inelastic bodies, whose vibrations are irregular and grating to the ear.

NOISES OF INSECTS. The sounds which insects produce are numerous and curious. It is not generally known, probably, that the noises which are supposed to proceed from the vocal organs, are actually made by the motion of their wings, or by rubbing their legs together. If we watch the house fly, we shall soon be convinced that he is destitute of voice, and that the noise proceeds from his wings; since, when at rest, he is always silent. This sound is invariably on F, in the first space of the treble staff, Ex. 1.



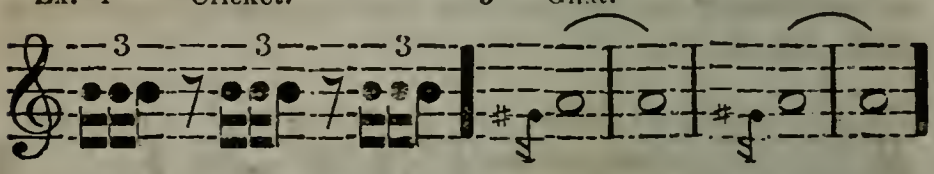
To produce this sound, the wings must make nearly three hundred and fifty vibrations in a second, or twenty thousand in a minute. The hum of the honey bee is the same. The mezzo tones that emanate from the host of fanners whose business is to ventilate the hive, and who thus diffuse a mellow music from their odorous wings, will on listening be found to be on F. The large humble bee, the contra basso of the tribe, performs the same note just an octave lower, Ex. 2 above: and the drone of the cockchaffer sounds his corno di bassetto on F below the base staff, another octave lower, Ex. 3 above.

Many observations have led observers to the conclusion, that the most prevailing sounds in nature are to be referred to the key of F. Scarcely an ancient

composition appears in any other key, except its relative minor D, for the first hundred years of the art. (See KEY and *Ancient* MODES.) In queen Elizabeth's Virginal Book of four hundred folio pages, nearly all the pieces are confined to this key. There is not an instance of a sharp being placed at the clef.

The lively note of the cricket is greatly admired It consists of three notes in rhythm, always forming a triplet in B. This sound is ascertained to be produced by the insect rubbing his legs sharply together. The grasshopper is of the same species, but his note is less powerful.

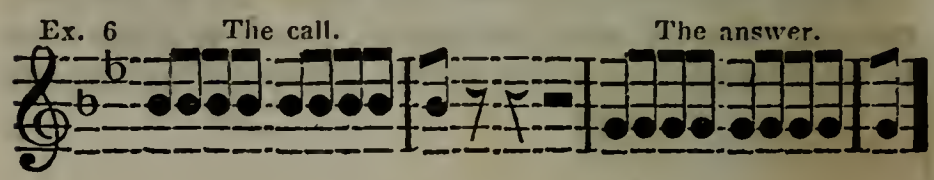
Ex. 4 Cricket. 5 Gnat.



Some of the smallest insects send forth noises in the night time, which are distinctly heard, and are often very annoying during our sleeping hours. The gnat for its size produces the most powerful and audible tone ; he may be called the trumpeter of the insect orchestra. On waking out of sleep, at first it appears like the distant sound of a post horn. The gnat's clear and well defined note is on A in the treble staff, Ex. 5.

The death watch is a sound resembling the tick of a watch, which proceeds from a small spider. A nice ear by attentive listening, will determine that the sound proceeds from two insects, probably the male and the female calling to each other. Gardiner ascertained one to be on B flat, and the other on G, Ex. 6.

Ex. 6 The call. The answer.



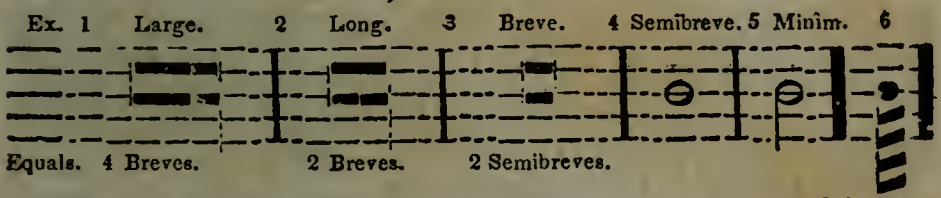
In the West Indies, the giant cockroach is a noted reveler, when the family are asleep. The noise is like a smart rapping of the knuckles on the table; on this account, he is called the drummer. Sometimes three or four may be heard answering each other; who often beat up such a row, that none but good sleepers can rest for them. (See Gardiner's "Music of Nature.")

NON, (Ital.) no, not; as, *non tanto*, not too much, *non troppo presto*, not too fast.

NOTATION, the manner of expressing or representing by characters, all the different sounds used in music. The ancient notation was different from the modern. The Greeks employed instead of notes the letters of their alphabet for this purpose, sometimes placing them erect, and sometimes inverting, mutilating, and compounding them in various ways, so as to represent by them all the different sounds or chords in their system. By a treatise professedly written to explain the Greek characters, we find they amounted to no less than 1240. Their great scale consisted of five tetrachords or eighteen notes, (see Scale;) and each of the notes of a tetrachord might be made the basis or tonic of a mode, (see Modes;) and every note in each mode was represented by a different mark. Further, each genus introduced a number of new notes, which were represented by different marks varying with each mode, thus forming an almost endless vocabulary; and as in the formation of these marks and signs, analogy was in no way attended to, nothing could be more confused, and the study of music became of course extremely difficult; hence the obscurity of the ancient writers on the science of music. This medley of characters was afterwards rejected by the Latins, who introduced for notes the letters of their own alphabet, A, B, C, D,

E, F, G, H, I, K, L, M, N, O, P, fifteen in number, by which they expressed all the sounds contained in the double octave. For the great improvement on this notation, we are indebted to Gregory who flourished near the close of the sixth century. He observed that in the scale of the double octave, the sounds after the middle note were but a replication of those which preceded; and thus discovered that every heptachord or system of seven sounds in succession, is precisely similar. He hence reduced the number of letters to seven, A, B, C, D, E, F, G, as we now have them. As notes were not yet introduced, but the letters were written in their place, he found it necessary in order to distinguish the second heptachord from the first, to make use of the small letters, a, b, c, d, e, f, g; and when it became necessary still farther to extend the scale, for the next heptachord these letters were doubled, aa, bb, cc, dd, ee, ff, gg. The next great step in improvement, was the introduction of lines. Hitherto the method had been to place all the notes or letters on one line, and to distinguish them by the different letters and characters. It was at the commencement of the eleventh century, that the scale took the form it now retains. This reformation was chiefly owing to Guido, (see Music,) who desired some more intelligible method to indicate the sounds. That which most naturally occurred, was to place the letters at different elevations, analogous to the elevations and depressions of the voice. To mark the degrees more accurately, parallel lines were used. To simplify this method, instead of repeating the letter, Guido merely wrote it at the beginning of the line, and whenever it occurred afterwards, simply put a dot in its place. Shortly after, to render this still plainer, he placed dots in the spaces between the lines; by which he reduced

the distances from one note to another, and made the scale much easier to perform at sight. These points were commas, accents, and little oblique strokes; and to designate their elevation in the scale, the letter or note C was indicated by a yellow line, and F by a red line. Two methods of notation were long after employed for the viol and other stringed instruments, called the *lyra way* and the *gamut way*. As yet, nothing was done towards expressing the rhythm, or time of the notes; sometimes one point served for a whole period. Succeeding reformers, therefore, deemed it necessary to break them into notes of shorter times; and thus, in the fourteenth or fifteenth century, the points of Guido gave place to notes of different length. In 1496, Gafforio, an Italian, speaks of five essential notes; as follows:



The two first are now obsolete, and the third is little used. In modern times, the binary division of notes has advanced, until we now have notes equal only to a one hundred and twenty eighth part of a semibreve, Ex. 6. (For the modern notation, see CHARACTERS, Ex. 4 to 16, and SCALE.)

To NOTE, to write music by musical characters.

NOTES, marks of sound. (See CHARACTERS and NOTATION.)

NOTES OF TASTE. (See ORNAMENTAL NOTES.)

NOTTERNO, (Ital. nightly,) a name formerly given to pieces played in the evening; now the term is applied to a *divertimento*.

NOVITIATE, (Lat. *novus*, new,) a beginner.

NUT, the small bridge or elevation at the top of the neck of a violin, violincello, &c. to raise the strings above the finger board.

O.

O. (Ital.) or; as, *violino o flauto*, violin or flute.

This capital letter forming a circle or double C ↄ, was used by the ancients as the sign of what they called *tempus perfectum*, perfect or triple time, from the idea that the number *three*, which they regarded the most perfect of all numbers, would be best expressed by a circle, the most perfect of all figures. The imperfect or double time was designated by a simple C or a semicircle.

OBLIGATO, indispensible; a word applied to those accompanying parts in a composition, which cannot be left out without destroying the intended effect. This term applied to fugues, &c. denotes constrained or subject to certain rules.

OBLIQUE. (See Motion.)

OBOE, (Ital.) a hautboy. (See Hautboy.)

OCTACHORD, (Gr. *octo*, eight, and *chorde*, a string,) an instrument or system comprising eight sounds or two disjoint tetrachords. The octachord or lyre of Pythagoras consisted of eight strings, forming two disjoint tetrachords, extending from E in the third space base staff, to E first line treble staff.

OCTAVE, the eighth interval in a scale of sounds; which being considered the same as the first, is denoted by the same letter of the alphabet. The scale of eight sounds itself, is also called an octave. (See Interval and Scale.)

OCTAVE FLUTE. (See Flute.)

Rule of the OCTAVE. (See *Figured* Base, I.)

OCTAVINA, an octave spinet.

ODE, (Gr. *ode*, a song,) a lyric poem divided into verses with unequal but regular metrical lines, proper to be sung and accompanied by some musical instrument. The ancient odes were generally in honor of the gods.

OMNES, (Lat.) all; an ancient term, same as *Tutti*.

OPEN, opposed to stopped, a technical term used by organ builders; as, *open diapason*, a set of open pipes.

OPEN STRINGS, the strings of a violin, &c. when not compressed or stopped by the fingers, or when they produce the natural sounds to which they are tuned. The note thus sounded is called an *open note*.

OPERA, (Ital.) a dramatic composition set to music and sung on the stage, accompanied with musical instruments; a musical drama consisting of recitatives, songs, duets, choruses, &c. enriched with magnificent scenery, machinery, and other decorations, and representing some passionate action. The opera was first invented and exhibited at Florence about 1600, and nearly at the same time it was established at Venice; and about 1660 at Paris. The taste for this species of drama soon after spread into England. Imperfect imitations of the Italian opera took place from time to time, in which the words were in English, though the music was Italian; until at length a regular Italian opera was established. The opera affords an occasion for the developement of a talent for imitative music.

OPERA, (Lat. plural of *opus*, a work,) works, compositions; as, *Mozart's Opera* 20, Mozart's works No. 20.

OPERA BUFFA, (Ital.) a comic opera.

OPERA SERIA, (Ital.) a serious opera.

ORATORIO, (Ital. from *orare*, to pray,) *originally*, an improvement of those sacred songs and dialogues which were sung by the priests, &c. in the *oratory* or place of prayer; an imitation of the serious opera: *subsequently*, a species of musical opera, consisting of airs, recitatives, duets, trios, chorusses, &c.; the subject of which is taken from scripture, and can only be set to music of the sublimest style. Oratorios of the latter character were first produced about 1750. The personages at first were sometimes ideal, and sometimes from sacred history. Oratorios soon became great favorites in Italy, where they were constantly performed in Lent; and have since given birth to some of the noblest and most elaborate compositions of the great masters in that and other countries. The first oratorios performed in England were produced by Handel. After that great master, Smith, Stanley, Arne, Worgan, and Arnold, tried their powers in this higher walk of composition. Though some of their works possessed considerable merit, yet as connected with theatrical representations, they did not accord with public taste, they were so little encouraged, that for thirty years from about 1771, no new work appeared. Modern oratorios having no connexion with theatrical exhibitions, present some of the grandest displays of musical talent and labor; such as the 'Creation,' by Haydn. (See SACRED MUSIC.)

ORCHESTRA, that part of a concert room, theatre, &c. in which the musical performers are stationed; also the body of performers themselves. It is a Greek term derived from *orcheomai*, to dance, and was by them applied to a circular part of the theatre where the dances were performed. At Rome, the orchestra was separated from the parts occupied by the performers, and furnished with seats appropriated to the senators, magistrates, vestals, and other persons of distinction.

The full and complete effect of a number of voices and instruments conjoined, depends on the just proportions in which they are brought together in the orchestra. Formerly, the materials were collected promiscuously; and too many of one kind, or too few of another, destroyed the balance of sound necessary to a grand effect. The proportions of the band at Westminster abbey in 1791, would now destroy the finest compositions. These were,

Stringed instruments, - - - - -	377	
Wind instruments, - - - - -	118	
Drums, 8; Organ, 1 - - - - -	9	
Vocal performers, - - - - - -	563	1067

Then the hautboys and bassoons were used as mere helpers to fill up the chorus; but now they are raised to the rank of principals, and few duplicates are ever admitted. The great defect in most orchestras, proceeds from that part which is most essential, being the weakest. This no doubt arises from the greater difficulty in procuring these performers, and the usual method of making up the number, by materials most easily obtained. Among the instruments, we never have sufficient power in the first violins and violincellos. In the voices, we lament the weakness of the treble and alto, which are often borne down by the merciless tenor. The following is the scale for an orchestra of 250 performers, recently adopted with success at some of the late festivals in England.

Vocalists.		*Instruments.*		
Treble, - - -	50	First Violins, -	24	
Alto - - - -	26	Second do. -	24	
Tenor, - - -	30	Violas, - - -	14	
Base, - - -	40 146	Violincellos, -	12	
		Double bases, -	8	82

Flutes,	- - -	2		Drum, - - -	1
Hauthoys,	- -	2			
Clarinets,	- -	4		Instruments, - -	104
Bassoons,	- -	4		Vocalists, - - -	146
Horns,	- - -	4		Total, - - - - -	250
Trumpets,	- -	2			
Trombones,	- -	3	21	An organ of first rate power.	

If the orchestra is reduced to one half the present number, the wind instruments will admit of no reduction, beyond the duplicate clarinets and bassoons. At a splendid musical festival held in the minster of York, England, in 1825, there were 619 performers, and an audience of more than 6000 persons: the festival continued four days; during which the Messiah and the Creation were both performed. The orchestra was composed of,

Conductors 2, Leaders 4, - - - - - -	6
Principal singers, male 8, female 7, - - -	15
Chorus do. Treble 90, Alto 70, Tenor 90, Base 100, -	350
Instruments, stringed 174, wind 71; Drums 2, Harp 1,	248
	619

To secure the well going of the chorus, the vocal leaders should be placed in the rear of their part; in which place they will be better heard: and as it often happens that the most experienced musicians have the weakest voices, it is best to couple them with the strongest; these correctly led, will contribute much to keep the part firm and steady. It is important that this arrangement be made with the leading singers, as they invariably think themselves entitled to a more conspicuous place, and press forward to get into the front. In arranging the violins, those who are accustomed to play the second part, should not be placed among the first violins. As the voices form so large a portion of the orchestra, a simultaneous effect from them is of the first importance. For this purpose, the conductor should be

so placed, that he can command a complete view of the choir. In accompaniments for single voices, the stringed instruments are often overpowered by the wind instruments. The pianissimo can be performed by many stringed instruments in concert, hence they are to be preferred to wind instruments; and but few of the latter should ever be used for this purpose.

ORCHESTRAL, an epithet applied to music composed for, or performed by an orchestra.

ORDINARIO, (Ital.) usual: as, *tempo ordinario*, in the usual time. *(little used.)*

ORGAN, a well known wind instrument, containing numerous pipes of various dimensions and powers. The organ is generally used in churches, and is the fittest instrument for sacred music, on account of its tones and its power of sustaining the sounds. Our remarks on the organ will be arranged under the following heads: first, its *origin and history;* second, its *construction;* third, *description of particular organs;* and fourth, its *powers and uses.*

I. History of the organ. Of this noblest of all instruments, as its name denotes, Greek *organon*, Latin *organum*, the instrument, by way of excellence, a few historical notices may probably afford some amusement and instruction to the reader. The origin of the organ is involved in much obscurity, chiefly arising from the various senses in which the term was anciently used. St. Augustine, so late as his time, says, 'All musical instruments are called organs, not only that which is slender and blown with bellows, but also every one else of a bodily shape, [i. e. wind instruments of all kinds,] which is adapted to singing, and which the singer on that account employs.' In Gen. iv. 21, the word means simply wind instruments. The idea of the organ was doubtless at first derived from the Pandean pipes.

A Greek epigram supposed to have been written in the fourth century, affords the most ancient proof of an instrument resembling the modern organ. It runs thus: 'I see reeds of a new species, the growth of another and a brazen soil, such as are not agitated by our winds, but by a blast that rushes from a leathern cavern beneath their roots; while a robust mortal, running with swift fingers over the concordant keys, makes them smoothly dance and emit melodious sounds.' Of a much earlier date, was an instrument resembling our organ, termed the *hydraulicon* or water organ, in which the air in some way unknown to us, was introduced into the pipes by means of water. This was the discovery of Ctesibius of Alexandria, about the year 220, or rather, an improvement of his on the invention of Plato called the *clepsydra* or water clock, which played the hours of the night on flutes. In the sixth century, the hydraulicon gave place to the wind organ, which Cassiodorus thus describes: 'The organ is an instrument composed of divers pipes formed into a kind of tower, which, by means of a bellows, is made to produce a loud sound: and in order to express agreeable melodies, there are, in the inside, movements made of wood, that are pressed down by the fingers of the player, which produce the most pleasing and brilliant tones. The organ is supposed to have been first introduced into the service of the church at Rome, by pope Vitalian, in 670. In the next century, the Greek emperor at Constantinople, Constantine Copronymus, sent an organ as a present to Pepin king of France; Greece claiming the honor of its invention. In the time of Charlemagne, organs were brought from Greece into western Europe, and soon became common. In 812, the artists of that prince built one at Aix la Chapelle, on the Greek model.

Before the tenth century, organs found their way into England; and during that century, became common and were spread through Germany and Italy and England. Being admitted into all the countries of Europe, they served to foster those seeds of musical genius, which, for want of opportunity, had hitherto been buried in monastic seclusion. To the organ of this period, may be traced the first dawn of harmony. (See *History of* Music.) Organs of enormous size were then used, as we may learn from the description of one erected in 951, for the bishop at Winchester, thus narrated by Wolfstan:

'Twelve pair of bellows, ranged in stated row,
Are joined above, and fourteen more below,
These the full power of seventy men require,
Who ceaselessly toil, and plenteously perspire,
Each aiding each, till all the wind be prest
In the close confines of the incumbent chest,
On which four hundred pipes in order rise,
To bellow forth the blast that chest supplies.'

This organ, we are told, had but ten keys, with forty pipes for each key. It would thus seem, that as many men and as much exertion were required to work the wind, as would now be necessary to man a frigate. It is supposed, however, that the seventy bellows blowers kept not their bellows in action at the time of the performance, but previously filled the huge chest with wind, and then left it to be expanded as occasion required. From this description, we learn what progress had then been made towards its present state of perfection. It is a matter of wonder, that an instrument whose principle of construction is so very simple, however complicated its mechanism when applied to a variety of stops, should have been so many centuries in a state of such imperfection: for the keys are said to have been five or six inches broad, and like the carillons of Holland, must have been pressed down by the fist. The pipes made of

brass must have been so shrill and piercing as to produce no agreeable sounds. The compass did not exceed two octaves in the twelfth century, about which time, half notes were introduced at Venice. It was not until the fifteenth century, that its construction was so far improved that both hands could be used in playing on it. Registers, without which a variety of stops could not be formed, were not invented until about the year 1600. From all this, we may justly conclude, that an organ in any degree deserving the name, could not have been constructed many years before the reformation. Before this, however, the important addition of pedals was made at Venice, by Bernard a German; to whose countrymen we owe most of the subsequent improvements in bellows, stops, &c.; and among whom its construction has been a work of great repute; and the names of their first organ builders are still remembered with honor. In England, we find scarcely any mention of organs, from the reformation down to the time of Charles the first. During the wars of his unfortunate reign, it is well known, that in 1640, the organs throughout the kingdom were nearly all sold or destroyed, and the professors of the art of music were driven to other resources for their support, by the furious opposers of cathedrals and episcopacy: so that on the restoration of choral service, instruments, books, and performers and singers, were equally difficult to be procured. Yet Cromwell himself was partial to the organ; and caused the one at a college in Oxford, to be removed to Hampton Court, where he often entertained himself by listening to it. He also connived at Dr. Busby having choral service with an organ at his house in Westminster, when it was forbidden throughout the realm. At the restoration in 1660, very few organ builders were found in England, which led to

the introduction of foreign artists, particularly Bernard Schmidt, commonly called father Smith, many of whose organs are now in use. His largest organs had about twenty stops; and one of them had two keys to express G♯ and A♭, and also D♯ and E♭. From the competition and patronage presented before organ builders, and from the progress of musical science, organs, in modern times, have been brought to a great degree of perfection. Mr. Liston, an English clergyman, has invented an organ which is capable of rendering every scale perfect. For this purpose, he has introduced pipes for those notes which are a comma too sharp or too flat in the C scale; and has arranged them in a few sets in such a manner, that those of one set will render all the intervals perfect in any particular key. Each set is connected with a pedal, by pressing which, those pipes that are wanted in that key are opened; and all that is necessary in modulation, is to press another pedal.

In this country, the art of organ building has made great improvements. That recently built by Mr. Thomas Appleton of Boston, for the Bowdoin Street church, is probably not inferior to any in the country, and will well compare with the best imported organs in power and effect. Its sub-base is peculiarly grand and solemn. The largest pipe is 24 feet in length, and its pitch is G, two octaves lower than the G string of the violincello. Its cost was $4000.

II. Construction of the organ. The organ is composed of various distinct parts, which we shall describe separately; at the same time, tracing step by step their connexion: viz. The *pipes*, *wind chest*, *bellows*, *key boards*, *pedals*, and *stops*.

1 *The* pipes, the tubes into which the air is admitted to produce the sounds, made of wood or soft metal, and of various lengths, from thirty two feet

to half an inch above the orifice or mouth. The metallic pipes are round, and the wood pipes square. The former are always open at the upper end, and the latter are usually closed, which renders the sound more soft and mellow. The theory of the sounds produced by pipes, will be given under the head *Pipes;* and additional particulars respecting their qualities, under *Stops* below. We shall here simply describe the *four* sorts of pipes used in organs.

1 *Diapason pipes* are constructed on the principle of the common whistle, and are by far the most important and numerous in the organ. The wind enters the lower end, which in metallic pipes is conical and in wood pipes a short tube, but is prevented from going directly into the pipe by a plate of metal or wood entirely filling the pipe, except on one side, where there is a narrow open slit, through which the air is forced to pass. Just above this slit, a corresponding one is made in the side of the pipe; the upper edge of which called the *lip* is made of soft metal and a little bent in, so that the wind passing from the lower slit may break against it, some of it passing alternately in and out, and thus setting into vibration the column of air inclosed in the tube. In the metallic pipes which are round, the part of the pipe near the slit is flattened. To prevent the lateral escape of the air, and to assist in tuning, perpendicular ears are commonly placed at each end of the slit. If the current of air is too strong, or the slit too thin, the harmonics of the natural sound will be produced. (See Pipes.)

2 *Reed pipes* are those in which the vibrations are excited and the sounds produced by the current of air passing into the pipes by means of reeds. The influence of the reed on the pipe is very great. Those are the most perfect, in which the reed and the pipe

are separately tuned in unison; but considerable latitude on each side exists. Within certain limits, the reed and the pipe will accommodate themselves to each other, and a mean tone will be produced, but less powerful and pleasing. But forced beyond certain limits, the pipe ceases to sound; and if any note is given, it will be produced by the reed alone. But there is a difference in different pipes. The large pipes, provided the reed moves freely, will speak when the pipe has ceased to resound; but in small and narrow pipes, like the hautboy, the reed and the pipe must closely correspond, or the reed will not vibrate. The influence of the air in the pipe on the the reed, by which it is set into vibration, causes the *quality* of the tone to depend materially on the figure. A funnel shaped pipe made of two cones, the upper one more divergent that the other, like the common funnel, gives the clearest and most brilliant tone. On the other hand, if the upper cone is more contracted at the top, so as to diminish the aperture, the sound will be stifled. But if two short cones, like the larger part of a funnel, united base to base, are adapted to a long conical pipe, the sound acquires a remarkable fulness and force. The quality of the tone depends also on the nature and structure of the reeds. (See Reeds and Pipes.)

3 *Vox humana* (Lat. human voice) *pipes* are of a most singular species, intended to represent the human voice. This pipe is composed of a short cone surmounted with a short cylinder; with the pitch entirely regulated by a reed. It is, however, but a poor imitation of the human voice, and is not often introduced into modern organs.

4 *Chimney pipes* are closed at the upper end by a cover, into the center of which a small pipe is in-

serted. The sound is intermediate between the open and stopped pipes.

2 *The* WIND CHEST is an air tight box, of a cubical shape, connected by a tube with the upper part of the bellows, into the top of which the pipes are inserted to receive the wind, whenever a communication is opened. The top of the box consists of two boards, with a separation between sufficient for the slides. The upper sometimes called the *sound board*, is penetrated with as many holes as there are pipes, which are arranged in as many rows or series as it contains stops; the holes for the corresponding pipes in the several stops, that is, the pipes which may be sounded by the pressure of any one key, are placed in rows across the board. Immediately under the sound board, and above the other top board, are the *slides*, which pass the whole length of the box, or as far as the stop extends. For each stop, there is a particular slide. The several slides are separated from each other by partitions of narrow thin strips of wood, and protected laterally from the external air, by the pieces of boards which connect the two top boards. These are all glued perfectly tight. The slides are made of wood, and are from a third to half an inch in thickness. To allow of a free motion and still exclude the external air, the surfaces of the slides and of the boards in contact with them must be made smooth and even. The slides when not drawn out, are penetrated with holes exactly corresponding with those in the sound board. Care must be taken, that the pipes do not come through the sound board, so as to interfere with the motion of the slides. To the end of each slide a lever is attached, which is connected with the handle at the side of the key board, on which the name of the stop is written. By drawing this handle, the slide is

moved a short distance, so that its holes no longer correspond with those in the sound board; thus, in playing those stops will not sound. The *lower board*, which is properly the top of the wind box, is of considerable thickness. The upper surface of it is also penetrated with holes corresponding to those of the sound board, and of the slides when in. In order to prevent any air passing when the slide is drawn, these holes and also those on the under side of the sound board, are surrounded with soft leather; and to make the surface more smooth, black lead or some similar substance is rubbed on the surface of the slides. On the lower side of this board, in the inside of the box, are grooves cut across, from which the holes issue; each groove communicates with all the holes that belong to one key of the key board. The grooves are covered with valves lined with soft leather to make them tight; and are pressed over the groove by a pliant spring in the interior of the box. Connected with each valve, is a small wire which passes through the bottom of the box, where it is surrounded with leather to prevent the escape of the air. These wires being connected by means of levers with the keys, are drawn down by the pressure of the keys, and thus open the valves to admit the air to the pipes. It will be thus observed, that the sounds are regulated by two distinct actions; first, by opening the valve which admits the air to all the holes of the lower board; and second, by the drawing the slides, so as to admit the air to such stops as we please. We will simply add, the wind chest should be large, in order to secure an equal and constant pressure into the pipes, unaffected by the action of the bellows.

3 *The* BELLOWS, (see BELLOWS.) In addition, we observe, the bellows should be of large capacity; one if well constructed, is sufficient for the largest organ

in this country, and better than the seventy of our ancestors. (See *History* above.)

4 *The* KEY BOARD, or CLAVIERS, (see CLAVIER,) the whole range of keys in front of an organ ; which are pressed down in playing, so as to raise the valves and admit the wind into the desired pipes. The key board usually extends from double C to F in alt, or four and a half octaves. The long or white keys represent the diatonic notes in the natural scale, and the short or black keys the intermediate semitones. Small organs have but one key board, but large ones have three or four, and sometimes five, besides one for the feet ; the latter extends but one or two octaves, and is used for very low notes.

5 PEDALS, is a term sometimes applied to the keys of the foot keyboard ; but more properly applies to a foot board attached to several of the stops, by pressing which, they may be immediately closed, and again by raising the foot immediately opened ; a pedal is also attached to the door of the swell organ, to open and close it at pleasure.

6 STOPS, a collection of pipes similar in quality and tone, that extend through the whole or a great part of the compass of the instrument. Some stops are soft, others brilliant, and some of a thrilling nature : some imitate the flute, hautboy, clarinet, and bassoon ; others the trumpet, trombone, &c. In general, the more slender the pipe, and the harder the substance, as copper, pewter or tin, the more brilliant and piercing the sound : pipes of wood or lead, on the contrary, give soft sounds. The following are the principal stops of a church organ, the size of which is designated by the longest pipe.

1 *Open diapason*, a stop made of metal, which commands the whole compass of the organ ; called *open* in distinction from the *stopped* diapason. The

extreme pipes are 8 feet, and $4\frac{1}{2}$ inches in length; it is hence called a stop of 8 feet.

2 *Stopped diapason*, a stop whose pipes are commonly made of wood; closed at the upper end with wooden stoppers or plugs, and consequently only half as long as the preceding. (See Pipes.) The tone of this stop is rendered soft and mellow by thus closing the pipes.

3 *Principal*, a metallic stop an octave above the diapasons, originally distinguished by that name, because holding in point of pitch the middle station between the diapason and fifteenth. It forms the standard for tuning the other stops.

4 *Twelfth*, a metallic stop, so denominated from its being tuned a twelfth or octave fifth above the diapasons. This stop, intended to represent one of the harmonic sounds, cannot be properly played alone. To accomodate it to the ear, the diapasons, principal, and fifteenth, should accompany it.

5 *Fifteenth*, a stop which derives its name from its pitch, two octaves above the diapason, whose longest pipe is therefore 2 feet. This stop and the twelfth mellowed and embodied by the two diapasons and principal, form a compound proper for accompanying a choir in common church music; and are hence the proper stops for a small organ.

6 *Tierce*, a stop tuned a major third above the fifteenth, only employed in the full organ.

7 *Dulciana*, a stop of peculiar sweetness of tone, which it derives chiefly from its pipes being more slender than those of the other stops: it is in unison with the diapasons, and descends only to G gamut.

8 *Flute*, a stop imitative of the flute or flageolet, in unison with the principal, but much softer.

9 *Bassoon*, a reed stop imitative of that instrument; used only in the lower part of the scale, and in unison with the diapason.

10 *Vox humana*, a reed stop, whose tone is intended to represent the human voice; but it is seldom so good as to render it agreeable.

11 *Hautboy*, a reed stop to imitate the hautboy, in unison with the diapasons.

12 *Cremona*, one of the most pleasing and useful reed stops, in unison with the diapasons.

13 *Trumpet*, a reed metallic stop, whose tone imitates the trumpet. In large organs, it generally extends through the whole compass. The mouth of the pipes resembles the trumpet. At the lower end, in the cavity called the socket, is fixed a brass reed, stopped at the lower end and open in front, furnished with a tongue or brass spring that covers the opening, which is put into a vibratory motion by the admission of air, and produces the imitative sound. This is the most powerful stop in the instrument, and improves the tone as much as it improves the peal of the chorus. In unison with the diapasons, it strengthens the foundation, subdues the dissonances of the thirds and fifths of the sesquialtera, and imparts to the compound a richness adequate to the sublimest effects.

14 *Clarion*, an octave trumpet stop, used on extra occasions.

15 *Sesquialtera*, a mixed stop, running through the instrument, and consisting of three, four, and sometimes five ranks of pipes, tuned to the harmonics of the diapasons. The whole stop is above the fifteenth; viz. the *seventeenth*, *nineteenth*, *twenty-second*, &c. In small organs, this stop is divided at middle C; and the lower part is called the sesquialtera, and the upper the cornet.

16 *Mixture* or *furniture*, a stop similar to the above, but more shrill; used only in the full organ.

17 *Cornet*, a stop consisting of five pipes to each

note, having beside the unison of the diapason, its third, fifth, octave, and seventeenth. It is employed only in the upper part of the organ, and used only in full chorus.

Other stops are used in large organs in octaves below the diapasons: as *double diapason*, an octave whose longest pipe is 16 feet. The lowest pedal stop ever used is 32 feet, two octaves below the diapason.

III. Description of organs. For a description of ancient organs, see *History* above. Organs vary in size from two to seventy five or more stops, with from one to five key boards for the hands, and one or two for the feet. Two of the largest organs in the world are at Haarlem, and Hamburg. The former contains 60 stops, and 5300 pipes including two of 32 feet; and contains three key boards, besides one for the feet. The Hamburg organ contains 67 stops, 3 pipes of 32 feet; and 9 of 16 feet. A large portion of the pipes of such organs are nearly useless, and serve only to contribute noise. The largest organs in the United States contain about 1500 pipes, which are sufficient for all the ordinary purposes of sacred music. A good church organ is usually divided into three parts, the great organ, the choir organ, and the swell. The great organ is the largest and loudest. The choir organ is to accompany the singers, and is therefore small and voiced very soft. The swell is voiced the same. There is sometimes a fourth division for the pedal keys. Such an organ contains about twenty stops, and has three key boards; the lower and front are for the great organ; the middle for the choir organ; and the upper for the swell. The great organ contains the stops, 1, 2, 3, 4, 5, 13, 14, 15, 16, and 17, mentioned above; the choir organ 1, 2, 3, 4, 7, 8, and 9; and the swell 1, 2, 3, 11, 13, and 17.

The choir organ contains all the stops necessary

for a small church organ; viz. the two diapasons, dulciana, principal, twelfth, fifteenth, and sesquialtera, the four latter connected with a pedal to take off, and the trumpet. Such an organ will cost about a thousand dollars. In addition to this, a great improvement would be made by the addition of the two diapasons and the hautboy for the swell, and an octave and a half of pedals in wood for the feet, which will make an addition of about 400 dollars. The swell is a small organ encased, with a door made to open and shut by means of a pedal moved by the foot, so as to give to the sound that increase and diminution which the word indicates.

IV. Powers and uses of the organ. Of all instruments, this is the most noble, possessing powers the greatest extent and variety. Its heavenly tones of solemn grandeur, produce the most sublime sensations, and render it peculiarly adapted to the services of the sanctuary. Holland and Germany are spread over with these majestic instruments, in profuse variety. The effect of the stupendous Haarlem organ surpasses every thing the mind can conceive; they are sounds which seem to roll from the skies into the deep abyss of harmony. In the puritanical service of the Dutch, nothing but psalmody is ever performed; and 3000 voices sometimes unite with one of these grand organs; which bursts forth like the 'voice of many waters.' No instrument on earth can be compared to the organ for fulness, majesty, richness, modulation, and condensation of sound; and no instrument seems therefore so suited to the exclusive adoration of Him whose 'voice is mighty in operation, and full of majesty.' Perhaps no work of man's device can claim equal power of exciting and arresting the feelings. Such is the power and majesty of the instrument, that it will at all times draw

forth whatever the genius and talents in any age may produce. It is to be regretted that an instrument of such powers should not more generally be introduced into our churches; and that men of religious principle and good taste should not make it a point of duty to learn to perform on it in such a manner as to assist in the devotions of public worship. In the opinion of the reformers, the adoption of a purer faith and a simpler form of worship, than the Roman Catholic, did not require the expulsion of the organ. Most of the protestant churches on the continent of Europe and the church of England concur in the use of this heavenly instrument; and the Scotch presbyterians and English dissenters are consequently alone in their aversion to its sacred use. This same spirit of hostility to the organ which our forefathers imbibed in England, when the organ was desecrated and abused by the then impure English church, and which they brought with them to these shores, we are glad to see is gradually giving way. May the churches in this country guard against its abuse, and consecrate its solemn tones to the service of the Lord of hosts. (See Organist.)

Barrel or Hand ORGAN, consists of a movable turning cylinder called a barrel, to which are inserted wires fastened at the ends, and pins, a little elevated above the surface, which pass round the cylinder: each circuit of wires and pins corresponds with the notes on some line or space of the staff, and each wire corresponds in length to the note which it represents. As the barrel turns, each staple or pin raises a small hook which acts on a key within or opens a valve to admit the air to the pipe or reed. Barrel organs are generally portable, and so contrived that the same action of the hand which turns the barrel, supplies the wind by giving motion to the bellows.

Different tunes are pricked on the same barrel; and the hooks are brought into contact with them, by a small horizontal motion of the barrel.

HYDRAULIC ORGAN, a musical instrument, that plays by water instead of air.

ORGAN BUILDER, an artist whose business is to construct, and to tune and repair organs. An organ builder, besides possessing a nicely discriminating and cultivated ear, and a sound judgment in the vibratory qualities of wood and metal, ought to be acquainted with the principles of pneumatics, generally versed in practical mechanics, and so far informed in plain counterpoint and the simple elements of musical composition, as in some degree to be capable of trying the different stops and combinations of his own instruments, and of deciding for himself on their effects in performance.

ORGAN LOFT, the space in front of the organ.

ORGAN MUSIC, music composed for the organ, or requiring the organ to produce the desired effect.

ORGAN POINT, a passage in which the tonic or dominant is sustained, while the other parts of the harmony proceed in some degree independently of it. (See PEDAL NOTE.) The term is also applied to a pause on a note. (See CADENZA.)

ORGANIC, the ancient Greek term for instrumental; as, *organic music*, for instrumental music.

ORGANIST, a performer on the organ. The qualifications for an organist are multifarious. He must have a thorough knowledge of music, be acquainted with harmony and modulation, and skill in the management of the organ, and should be a man of taste, judgment, and piety. As organs are and ought to be used chiefly for devotional purposes, the organist should himself feel the effects of its solemn tones in exciting devotional feelings; and should

regard himself as the servant of the congregation, to aid them in their devotions. The sanctity of the church, and the nature of the organ, clearly indicate that the style of music for that instrument, should be grave, severe, and majestic; and very different from that which is adapted to theatres, and secular concerts. Hence, the impropriety of employing organists that are connected with places of public amusements. When we consider the company that frequent such scenes, the feelings necessarily excited, the general habits of the musicians themselves, the character of the music, and style of performance, designed chiefly to call forth the applauses of the gay and trifling, we may readily conceive how inapt a preparation such employents form for a sacred service. Such an organist, coming into the church for his sabbath duties, after thus spending the week, and as is too often the case after spending the morning hours of this sacred day in his secular studies and practice, or in vain and worldly conversation and amusements, evinces by the first touch of his finger on the obedient instrument, the profane habitude of his mind. His style of music is injured by his associations, for sacred music spurns the contamination with secular. When will our churches act as if they regarded the music as a devotional exercise, and employ none as organists or leaders, who will not aid them in this branch of worship? (See ACCOMPANIST, and also La Trobe's "Music of the Church," ch. ix, *Voluntary*.)

To guide the organist in playing the harmony, we have said as much as our limits will allow, under the articles Accompaniment, and particularly figured Base. In playing the harmony, it is not always necessary to take all the notes of the chords; but in omissions, the essential notes of the chords must be seldom omitted. (See CHORDS.)

ORGANIZED PIANO FORTE, an organ and piano forte so conjoined that, by means of stops, the same set of keys serves for both and for either, at the pleasure of the performer.

ORGANO, (Ital.) an organ; for the organ.

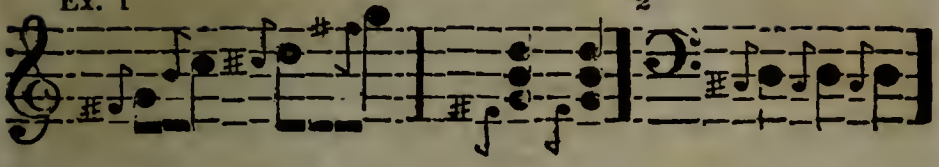
ORGANO PICCOLO, (Ital.) a small or chamber organ.

ORNAMENTAL NOTES, } are all those notes
ORNAMENTS, } in the melody which are not taken into the account in the harmony, or which do not belong to the harmonic figures. In this general definition, are included suspensions, transitions, and all other accidental notes, which distinguish figurative from plain music. Under this head, however, we shall illustrate only those ornaments that are commonly called *graces*. Those notes which are essential to figurative music and which are used in harmony, are explained under their appropriate heads. The graces are chiefly appropriated to airs, and solo movements. In harmony, except on a single keyed instrument, they have no place. Even in ornamental and secular music, their frequent introduction is inconsistent with expression; and their approbation by an audience indicates an effeminacy and a corruption of the public taste. (See EXPRESSION.) The following are the principal ornaments in use, arranged in alphabetical order.

I. ACCIACATURA, (Ital.) or TOUCH NOTE, a short beat, a grace peculiar to the piano forte and organ. It is taken a semitone below the principal note, struck only once and nearly at the same time with it, and instantly dropped. It is usually expressed by a small note, as in the following, Ex. 1. The acciacatura is often used on the organ in the base, to reinforce the harmony when a crescendo takes place; Ex. 2.

ACCIACATURA OR HALF BEAT.

Ex. 1 2

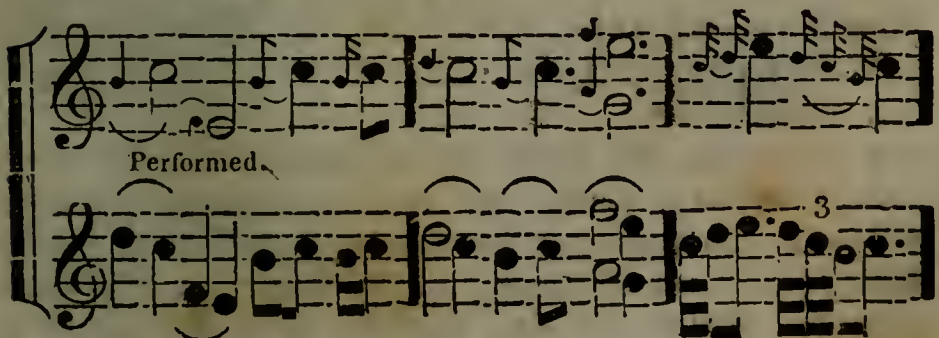


When introduced into a chord, a slanting stroke is sometimes drawn across the line, where the acciacatura is to be introduced. The design of this transient note, is to give strength and force to the note to which it is prefixed, and is struck with such energy, that it may be said to be driven into that note. The touch note precedes most simple sounds we hear, whether they proceed from sonorous bodies or voices. Modern authors use it in forcible expressions.

2 APPOGIATURA, (Ital.) or APPOGIATURE, a note of embellishment prefixed to a principal note, either a tone or semitone above or a semitone below, and always on the accented part of the measure. The appogiature is generally expressed by a diminutive note, as not constituting a part of the harmony, though essential to melody, taste, and expression; and borrows its time from the principal note that follows, which it usually robs of half its time, Ex. 3; but when used at a cadence, its duration is more lengthened, Ex. 4.

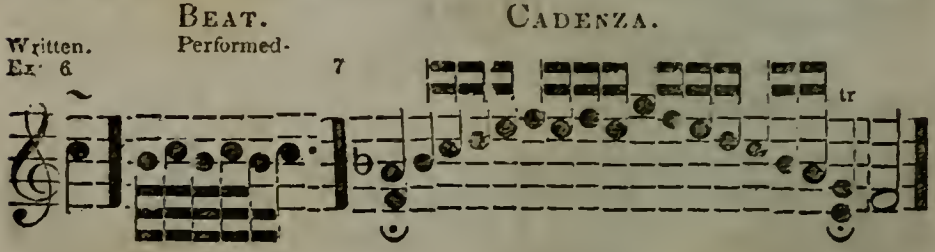
APPOGIATURES.

Ex. 3 Written. 4 5



By modern authors, the appogiatures are usually written as in the lower notes of the example; and then they are the same as suspensions taken without preparation, and transitions. Appogiatures may be doubled, tripled, &c. as in Ex. 5; and varied in many ways. They always are to be performed *legato* with the principal note. Their office in slow movements is to give smoothness and grace to the execution. In bold energetic movements, they not only serve to link the greater intervals, but afford the performer full scope for the display of dexterity of voice or finger, and for the employment of impassioned expression. As this grace springs from the passions, it will be found to enter into all the expressions in which the heart is concerned. It is one of the first tones which children use; for, in their ecstacies and imaginary woes, it forms the most prominent feature of their cries. This natural intonation in the hands of a musician, becomes the most sensible note of his art. (See "Music of Nature.") In a harmonic point of view, appogiatures form the highest class of discords, the same as suspensions; (which see.)

3 Beat, a kind of shake made with the semitone below, Ex. 6; not used in modern music.



4 *Half* Beat. (See *Acciacatura.*)

5 Cadenza, (Ital.) an extemporaneous passage which a solo singer or instrumental performer introduces in a piece of music, on the first note of a final cadence, which for this purpose is suspended by a

pause, Ex. 7 above. The first note of a cadenza is generally struck *forte*, to apprize the accompanying performers of its introduction. It must be of a style and character suitable to the piece, and also to the voice of the singer or nature of the instrument. Great science is requisite for the introduction and management of this species of embellishment; as the ear is sensible of any deviation from the course which correct harmony prescribes. With these restrictions, it is left entirely to the will and fancy of the performer, who is unrestrained both as to the rhythm and melody. The only design of the cadenza is to display the dexterity, and facility of execution of the performer; and when it is conducted with skill, and made the vehicle of new and appropriate effects, it may be tolerated. As its chief object is to please the ear, it has no place in music designed to exhibit and call forth the emotions of the heart: 'it has no soul in it.' The highest delicacy of style is required in the execution, which a singer is only enabled to give, by the selection of a proper vowel on which it is performed. If not judiciously applied, cadenzas rather injure than improve the effect. As an instance, we may quote that passage in the 'Creation,'

'With softer beams and milder light,
Steps on the silver moon through silent night.'

where a singer of estimation, not contented with what Haydn had written, run a chromatic cadenza on the word *silent;* utterly destroying the soft and beautiful effect, which the author had achieved by a gentle inflection of the voice. Rather than simplicity should be so offended, it would be better altogether to concede the right of the singer to a termi-

nating cadenza, as a tribute to his vanity. When reserved for the unpremeditated flights of ignorant and tasteless musicians, who fain would treat us with their facilities, it too often proves but the empty wanderings of ignorance and folly. The safest course is for a composer to write out in full all the embellishments he desires to have introduced into the performance.

6 GRUPPETTO, a term applied to two or three small notes, placed above or below a principal note, Ex 5 above.

7 MORDENTE, a kind of shake, not finishing on the principal note: marked *tr* or by a waving line tr. Ex. 8.

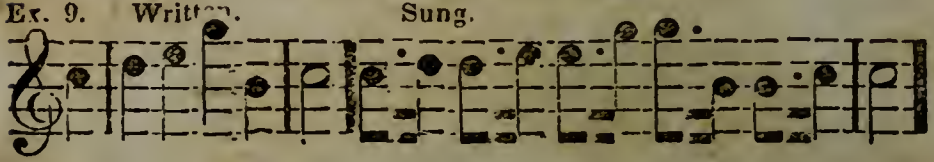
MORDENTE.

Ex. 8 Written. Performed.

8 PORTAMENTO DI VOCE, a grace used in vocal music, by which the lower note of an interval is connected with the upper to soften the break. Ex. 9.

PORTAMENTO DI VOCE.

Ex. 9. Written. Sung.

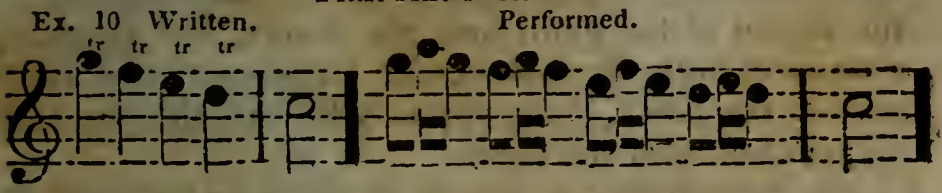


The term is also used for the slide of the voice as it glides through the interval between the two notes, as on the violin; which cannot be exemplified on paper. (See PORTAMENTO.)

9 SHAKE, an alternate reiteration of two notes, the principal note and the next above. There are several sorts of shakes.

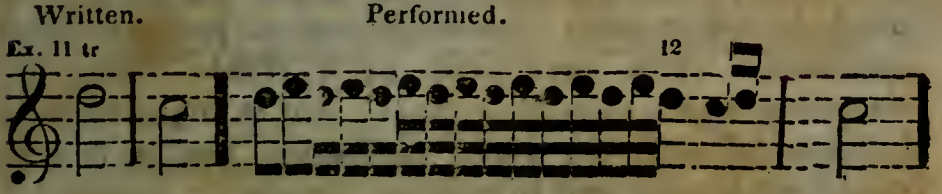
1 The *transient shake*, which is chiefly used in passages descending by conjoint degrees. Ex. 10.

TRANSIENT SHAKE.



2 The *continued shake*, whose duration is equal to that of the note, Ex. 11 : it should always end with a turn, Ex 12.

CONTINUED SHAKE.



The shake is one of the greatest ornaments of melody. To be good, it must combine rapidity, brilliancy, and equality. The best place for a shake is on the note next preceding the last in a cadence. The cadence is not to be interrupted for the sake of introducing a shake, as in the case of a cadenza ; but it should be performed in the strict time of the note. This grace is peculiar to the English, and is seldom used by the Italians. In England, it is considered as an indispensible requisite for every great performer. It is rather ornamental than graceful, designed to give brilliancy, and not to excite emotions. As it is purely artificial, it rarely enters into the passions. In execution, it cannot be well performed, unless the vowel is favorable to a pure and pliant tone. Great variety may be given to it, by combining the *forzando*, *crescendo*, or *diminuendo*. Formerly, compositions were crowded with shakes and trills, which produced a pert and unmeaning

effect. But since the introduction of other graces, we find them more sparingly used. In instrumental compositions, the shake has assumed a new character. Mozart, in his opera of the '*Zauberflote*,' at the ascent of the genii into the clouds, has given, by a series of butterfly shakes, such an indescribable lightness to the piece, as apparently to waft the vision by its airiness from the sight.

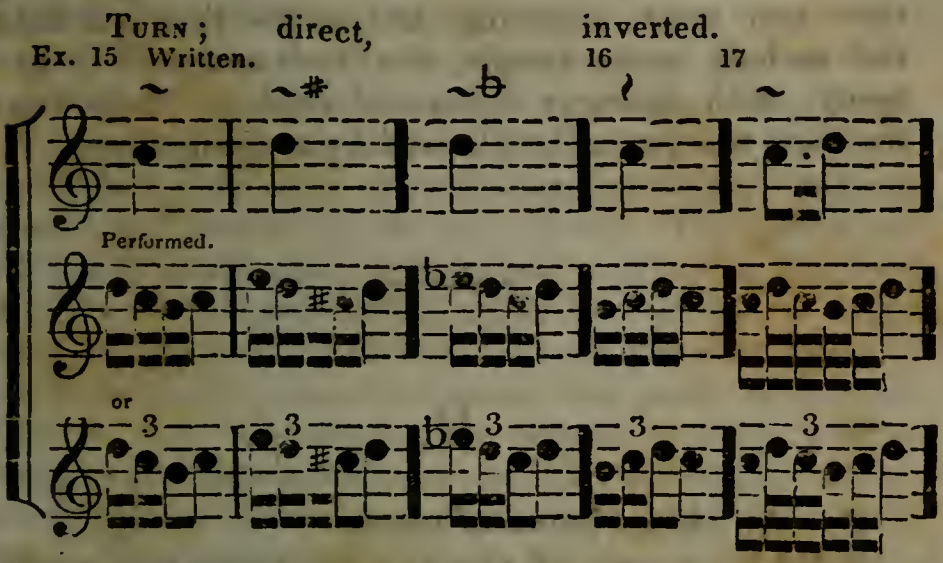
10 Strascino, a grace peculiar to vocal music, introduced in a slow movement, to connect two notes at a distant interval from each other; the sound beginning on the upper note, is carried down to the lower with an inequality of motion, Ex. 13. It is never used in ascending. In music of a pathetic cast, especially when performed by a treble voice, the strascino has a powerful effect; but it requires to be introduced with the nicest judgment, and to be executed with taste and precision.

Strascino.

11 Turn, an embellishment frequently used both in vocal and instrumental music, consisting of the principal note, the note above, and the semitone below. When the turn begins on the note above the principal one, it is called *direct*, Ex. 15; when it begins on the semitone below, it is termed *inverted*, Ex. 16. When introduced on a dotted note, the principal note is struck first, and the turn introduced on the dot, Ex. 17. Sometimes the notes of the turn are inserted, Ex. 14 above.

The turn is an ornament which is much abused; as it is one which second rate performers can easily

imitate. We often hear it attempted in choir singing, where it has no place at all, by those singers who are equally distinguished for vanity and want of good taste. In an accompaniment, it is equally out of place.



OSCILLATION, a term applied to the vibratory motion back and forth of a musical string.

OSSERVANZA, } (Ital.) with scrupulous
Con OSSERVANZA, } exactness; without diminishing or adding to any of the parts.

OTTAVA, (Ital.) an octave.

OTTAVA ALTA, *abbreviated* 8va, (Ital.) the notes to be played an octave higher than written, until the word *loco* appears. This is done to save a number of added lines, which are troublesome to the reader. Ex. 49, p. 71. When 8 is placed under base notes, such notes are to be played in octaves. Ex. 50, p. 71.

OUTER PARTS, an expression applied to the highest and lowest parts of a composition, as the treble and base of a chorus.

OVERLOADED, the harmony or accompani-

ments too full and heavy, or burdened with ornaments.

OVERTURE, an introductory symphony to an oratorio, opera, &c, generally consisting of three or four different movements. The overture is generally slow and more imposing and grand than a sonata, the melody more simple, but rich and bold in harmony, with stronger lights and shades. Sometimes the slow movement is followed by a spirited one.

P.

P. An abbreviation of piano.

PÆAN, a song of victory; the name was originally given by the Greeks to songs in praise of Apollo and Diana.

PANDEAN PIPES, (from *Pan* the god of shepherds, hunters, and rural sports,) a wind instrument of the greatest antiquity, made of reeds fastened together side by side, gradually lessening and tuned to each other; the instrument is tuned to the key of C, and the different notes are played by blowing into different pipes. The instrument is sometimes found in this country in the hands of wandering Italian minstrels.

PANDORA, an ancient instrument in the form of a lute, mounted with brass strings; borrowed by the Spaniards from the Moors.

PANTOMIME, a species of musical entertainment, so called because it is all *mimic*. The airs are generally a principal couplet, that returns often in

the course of the piece, intermixed with others more lively, which speak in the situation where the actor should place a determined expression.

PARALLEL MOTION. (See Motion.)

PARODY, a symphony on which is constructed a cantabile air with words.

PART, a piece of the score written by itself for the convenience of the musician, which each voice or each instrument has to perform. In choruses several voices, and in symphonies several instruments are employed on each part. The union of the parts constitutes the harmony. Four is the fewest number of parts with which the chords of complete harmony can be filled. At the first introduction of counterpoint, there were only two parts, called the descant and the tenor. At length a third and a fourth and more parts were added. There are instrumental parts; such as the violin part, the flute part, &c. The several books or sheets for the separate performers, are also called parts. In concert, every performer, except the conductor who generally uses the score, usually sings or plays from his single part.

PARTE, (Ital.) part.

Colla PARTE, with the principal part.

PARTITURA, (Ital.) the score.

PASSAGE, a small portion of music which can be sung or played by itself.

PASSAGIO, (Ital. a passage,) such ornamental notes as are glided, according to the taste of the performer, between the written notes.

PASSING NOTES are introduced between the essential notes of a chord, to soften the intervals and improve the melody. (See Transient notes.)

PASTICCIO, (Ital.) an opera, the music of which is selected from various composers; the words being adapted to the music, not the music to the words.

PASTORAL, a piece of music formed on words relating to a rural condition; or an air which imitates that of the shepherds, in tenderness, sweetness, and nature.

PASTORALE, (Ital. a pastoral,) a movement in 6:8 or 12:8 time, of which the characteristic is simplicity, similar to *Siciliana:* the name of an Italian dance in the rural style. Originally, the *pastorale* was a musical drama, in which the personages represented shepherds.

PATETICO, (Ital.) pathetic, a term applied to music intended to paint and move the passions, but more especially those of pain and sadness.

PAUSE, (see CHARACTERS 36, Ex. 36, and CADENZA,) a character denoting that the note over which it is placed, is to be drawn out to a length greater than its own, or embellished with appogiatures, shakes, and other graces.

PEALS, melodies for bells; a succession of loud sounds as of bells, of thunder, of grand sonorous harmonic combinations.

PEAN, a song of victory. (See PÆAN.)

PEDAL, (Lat. *pedalis*, of the foot,) *in a piano forte*, an apparatus moved by the foot to which the dampers are attached, used to increase or diminish the loudness of the sound. The grand piano forte has two pedals, the right hand called the open pedal takes off the dampers. In common piano fortes the open pedal alone is used, which is placed on the left hand side. (See PIANO FORTE, and ORGAN II. 5.)

PEDAL NOTE, a note held down in one part, during which the harmony formed by the other parts of the composition is allowed to proceed independently, (see CHORDS 28, Ex. 17, p. 82.) The pedal-note

is the tonic or dominant, and generally placed in the base; though not uncommon in the upper parts.

PEGS, pieces of hand wood used to tighten or relax the strings of a violin, &c.

PENTACHORD, (Gr. *pente*, five, and chord,) an instrument of five strings; a system of five sounds corresponding to the five tetrachords.

PENULT, the last but one; the last note but one of a musical phrase.

PER, (Ital.) for, by; as, *sonata per il piano forte*, a sonata for the piano forte.

PERCUSSION, an epithet applied to instruments played by striking.

INSTRUMENTS OF PERCUSSION are divided into two classes; *first*, those in which the music is merely rhythmical; as the Cymbals, common Drum, Chinese Gong, Triangle, Tabor and Tambourine: *second*, those which are melodic, or on which airs may be performed; as Kettle Drums, Bells, the Jews Harp, Harmonica or musical glasses, &c.; there is also the Tuning fork, used to give the pitch. (See these several articles.)

In wind instruments, the sound is produced by the column of air in the instrument: in stringed instruments, by the vibration of the string and sounding board: but in instruments of percussion, by the mass of the body itself; or, as in the case of the drum, by the parchment and column of air united. A solid body may vibrate, either in consequence of its inherent elasticity, by which, when forcibly deranged, it tends to return to its own proper figure and state; or in consequence of an external tension. To the former sort of vibrations, belong those of rods, tuning forks, plates, rings, bells, gongs, and vessels of all shapes, or generally of all solid masses which *ring* when struck; to the latter, those of vibrating strings

and membranes, such as the parchment of a drum and tambourine. Further, a solid may vibrate by its own proper elasticity in two very different ways. First, an undulation may be propagated *through* it, as through the air, by alternate compression and expansion; in this case, the solid is not the sounding body, as when the sound is communicated to the ear by water, or by a table. If the solid is homogeneous, such as the metals, glass, &c. the elasticity being the same in all directions, the vibrations will be propagated from the center of disturbance, exactly according to the same laws as a mass of air in the same shape. If a straight rod of glass or of metal is struck at the end in the direction of its length, or rubbed lengthways with a moistened finger, it will yield a musical sound of an extremely acute *pitch*, much more so than in the case of a column of air of the same length. The reason of this is the greater velocity with which sound is propagated in solids than in air. Thus, the velocity of propagation in cast iron is 10 times that in air. A rod of cast iron, then, so excited will yield, for its fundamental note, a sound identical with that of a stopped organ pipe of 1 : 10th of its length, and of an open organ pipe of 1 : 20th. The manner of exciting vibrations is commonly by percussion, by which the whole body is set into a vibratory motion by its tendency to restore itself to its original form. It may also be done by friction, as with a bow or moistened fingers. If the friction is gentle, the harmonics may be produced, according to the same laws as strings or pipes.

PERFECT, satisfactory to the mind and ear: in opposition to imperfect, &c.; as, *perfect cadence*, *perfect concord*, *perfect interval*, &c., (which see.)

PERFORMER, a practical musician, whether vocal or instrumental.

PERIOD, a musical sentence consisting of one or more sections, and always ending with a perfect cadence : it answers to a full stop in language. A period is regular, when it consists of two, three, or four measures, or any multiple of these numbers.

PERMUTATION, substituting a long note for a short one, a term applied fugues.

PERPETUAL, without end, as, *perpetual canon.* (See CANON.)

PHILHARMONIC, (Gr. *philos*, a lover, and harmonic,) name of a society of amateurs and professors.

PHONICS, (Gr. *phonce*, a sound,) the science which treats of the conducting and combining of musical sounds.

PHRASE, a regular course of notes, with a commencement and close more or less complete ; a phrase is the shortest musical sentence, usually consisting of two measures, and corresponds to a collection of words separated by a comma.

PHRASEOLOGY. (See PSALMODY.)

PHRYGIAN, (see MODES,) a name applied to a lively kind of music, which was adapted to martial instruments, as trumpets, hautboys, &c.

PIA. (See PIANO.)

SI PIACE, (Ital.) as you please ; an expression signifying that the passage may be sung or played in the performer's own style, or entirely omitted.

PIACERE, } (Ital.) at pleasure, with regard
A PIACERE, } to time.

PIANGEVOLE, } (Ital. *piangere* to weep,)
PIANGEVOLMENTE, } in tears ; in a soft, doleful, and complaining style ; pathetic.

PIANISSIMO, (Ital. superl.) very soft.

PIANIST, a performer on the piano forte ; and also a professor of that instrument.

PIANO, (Ital.) soft. (See DYNAMIC DESIGNATIONS.)

PIANO FORTE, (Ital.) a well known keyed instrument of German invention, so called from its combining softness and strength. The piano forte is a modern instrument, which has taken the place of the harpsichord. It was invented in Germany, about a hundred years since; but was not at first generally received, as it required a more delicate touch than the harpsichord, and its powers were different; hence it required the players to change their style. In the piano forte, little hammers now covered with leather, are used to strike the strings, in the place of the crow quill jacks of the harpsichord; which enables the performer to give a much greater variety to the the tones. On the introduction of the piano forte, the style of music was changed, and became more bold and flowing. The powers of the instrument have not been fully developed until within the present century. Even Haydn, whose later works discover a knowledge of its powers of expression, never contemplated such a display of its excellencies as Beethoven has since manifested. The manufacture of piano fortes has arrived at great perfection in this country. Those made by Chickering of Boston are pronounced by the best judges, to be equal to any in the world.

I. A DESCRIPTION OF THE PIANO FORTE. It is a stringed instrument with a sounding board. The *strings* are made of wires attached by screws and pins to an iron frame, and varying both in length and size, to produce the various sounds in the great scale. In order to render the largest strings flexible and at the same time heavy, the larger wires are wound with small ones, like the large strings of a violin and violincello. In the common chamber piano fortes, the smaller strings are double, to give greater intensity to the sound. In the grand piano forte, they are triple, or three strings for each key. Near one end

of the strings, there is an elevation corresponding to the bridge of a violin, that communicates the vibrations to the *sounding board*, which is made of clear, light and porous pine, and placed between the strings and the iron frame. The *key board* is similar to that of the organ; but, in modern piano fortes, extends an octave farther both upwards and downwards, or six octaves and a half. It formerly extended but five and a half octaves, from F two octaves below the base clef, to C in altissimo. When the key is pressed, the hammer by means of a spring is made suddenly to strike the string, and immediately to recede so as to allow the string to vibrate until the key is dropped, when it again rests against the string and stops the vibrations. By means of a *pedal*, however, the hammers may be moved from the strings, so as not to touch them when the key is dropped; thus a greater loudness and brilliany may be given to the execution. The grand piano forte has also another pedal, which is used to dampen the vibrations and stifle the sound. The long white keys represent the natural diatonic sounds; and the short black keys represent the semitones, the sharps of the notes below, and the flats of the notes below. To determine the letters on the key board, it must be observed, that the semitones are divided into clusters of twos and threes, between each of which are two white keys in contact; the white key next below every set of two short keys is C, from which the others can easily be found.

II. Fingering. That lightness of touch which is the first qualification for a good performer, is soonest obtained by putting the hand into the same easy curved position, as when we collect and pick up the crumbs from the table, the tips of the fingers just touching the keys. The hand and arm should be held in such a position, that the lower arm may be

horizontal, and the first joint of the long finger may range with the key, and so far forward that the fingers can reach the short keys, which are played only by the fingers, and not by the thumb. The most efficient practice is that of the scales, which should continually be performed with the crescendo, diminuendo, and every other variety of force. In running the scale or in changing the hand, the thumb must be drawn under two or three fingers, and placed on a key, so as to give the hand a fixed motion and position: and in moving in the opposite direction, two or three fingers are moved over the thumb in the same manner. In motions up and down the scale, the thumb should as much as possible be placed on the key note; and when the short keys are used, the thumb should take the next natural key above. The playing however admits of a great variety, and facility can only be obtained by practice.

III. Powers and uses of the piano forte. Its chief excellence consists in the capacity of obeying the touch, so as to enable the performer to vary and accommodate the expression to all those delicacies, energies, and striking lights and shades which characterize the more refined compositions of the present day. Of all instruments, it is the best for the accompaniment of the voice, to second and support the singer, without detracting from the vocal expression. In an orchestra and schools for practice, it is an excellent instrument in regulating the time and the pitch. From the facility with which the keys may be run over, there is danger, however, of substituting rapid execution and noise for expression; and to foster this inclination, the country is deluged with unmeaning compositions, variations, &c. 'The fingers are agile, while the mind is dormant; and the variationists have been justly termed the old clothesmen of the art.'

PIBCORN, a Welch wind instrument. (See HORNPIPE.)

PICCOLO, small; as, *flauto piccolo*, or octave flute.

PIECE, a composition, including all its parts and movements.

PIENO, (Ital.) full; same as *tutti;* as, *pieno coro*, a full chorus.

PIETOSO, (Ital.) in a soft feeling manner, calculated to excite devotion.

PIPE, any tube formed of reed, wood, or metal, which being blown into one end, produces a musical sound. The pipe, which originally was nothing more than an oaten straw, formed one of the first instruments by which melodious sounds were attempted. Various instruments made of pipes have been in use in all ages of the world. But the most powerful and grand instrument, and one in which the various sorts of pipes are used together, is the organ. The pitch of the sounds depends on the length of the pipes, but the quality of the tone depends on the size and matter of the pipe; as will more clearly appear below.

THEORY OF SOUNDS PRODUCED BY PIPES. 1 The *column of air* not the pipe *is the sounding body.* This appears from the fact that the materials of the pipe are of no consequence. A pipe of paper and and one of lead, glass, or wood, provided the dimensions are the same, produce under similar circumstances exactly the same tone as to *pitch.* The different *qualities* of the tones produced by different pipes, is to be attributed to the friction of the air within them, setting into feeble vibration their own proper materials.

2 The pitch of sounds *depends on the length of the pipe*, and the partial or entire closure of its ends. All pipes of the same length and of uniform size, whether large or small, and closed at both ends, like the stopped pipes of an organ, produce sounds of the

same pitch; and likewise pipes open at one end in the same manner produce sounds of the same pitch, but the pitch is an octave above that of the stopped pipes. Hence in speaking of an organ stop, or size of an organ, we name the stop from the length of the longest pipe; thus we say, a diapason stop of 16 feet. If the pipe is partially stopped, or varies in its size, the pitch of the sound is proportionally modified.

3 The *reason* of the uniform pitch of pipes of a given length, depends on the uniform velocity of sound. (See Sound.) If the air in a tube be put in a vibratory state, the vibrations will traverse the pipe from end to end with uniform velocity. If we take a cylindrical tube closed at one end, and suppose the air at the open end compressed, the vibrations will pass through the tube until they reach the closed end, and will then be reflected back to the open end and pass off into the open air. A single impulse like this will not produce a sound; but if the air at the open end is again compressed, at the instant the former vibration has passed out, and thus a regular alternate compression and expansion or passing out of the vibrations is kept up, a musical sound will be produced, whose pitch, as we have said, will be determined by the length of the tube. A tube double the length, will produce a sound an octave below; one of half the length, an octave above; one two thirds as long, a fifth above; and so on: the proportions corresponding to the mathematical divisions of a string. (See Monochord.) Knowing the velocity of sound, and the number of vibrations in a second for a sound of a given pitch, we can determine accurately the length of a pipe to produce a given sound.

4 *Harmonic sounds* are produced in a manner analogous to those produced by a string. If an impulse is given as before to the air at the open end of

the tube, and instead of waiting until the first vibration has reached the open end, a second impulse is given just in time to have the vibration reach the first vibration on its return precisely at the middle of the pipe, the first vibration will return back and the second will return to the opening after having traversed but half the pipe : if now the impulses are repeated just in time to have the vibrations meet the first vibration in the middle of the pipe, a sound will be produced of the same pitch as if the pipe should be stopped at the middle point. In other words, we shall produce the *octave* of the given sound. At the point where the two vibrations meet, the air remains at rest, like the nodal point of a string ; this is also called a nodal point. In the same manner, if the second vibration meets the first, when it has returned but one third the distance, and the third vibration meets the second at two thirds the distance from the closed end, and then the vibrations be continued regularly, those which pass out proceeding only one third through the pipe, we shall hear the sound of the *twelfth*, as in the division of a string. In this case there are two nodal sections. Thus we might proceed and obtain the double octave, the seventeenth, &c., as in the string.

5 Thus far we have spoken of a tube closed at one end. If *both ends are open*, a sound will be produced, but an *octave higher* than in a closed tube, as the vibrations simply traverse the length of the tube instead of twice the length, as in the former instance.

6 In pipes *partially closed*, or not of *uniform size*, the pitch will be proportionably modified. Hence pipes may be *tuned* by partially closing, or by expanding the orifice, as well as by lengthening or shortening the pipes. Closing or lengthening a pipe depresses the pitch, and *vice versa*. By boring a series

of holes at proper distances along the side of a pipe, which may be closed or opened by the fingers, one pipe as a flute may be used to produce various fundamental sounds and their harmonics, instead of a complicated union of several pipes as the pipes of Pan; unless the latter are played by means of machinery, as in the organ.

7 The *methods of exciting the vibrations* in pipes are various. We shall describe the three following as being the most common. The first method is given merely to show that it is the air which vibrates and produces the sound.

1 *By a tuning fork.* If we attach a circular disc to the end of a tuning fork which is in unison with some of the notes of a flute, and place the disc over the mouth hole of the flute with the fingers on for the given sound, and set the fork into vibration on the opposite branch, a note of surprising strength and clearness will be heard.

The most usual means of exciting the vibrations of a column of air in a pipe, is by blowing into or rather over it, either at its open end or at an orifice made for the purpose at the side, or by introducing a small current of air into it through an aperture of a peculiar construction called a reed; as follows:

2 *By a reed.* A reed pipe is provided with a tongue or flexible elastic piece of wood or metal, which nearly stops the aperture, and which is alternately forced away by the current of air, and returns by its elasticity; thus producing a continual and regularly periodic series of interruptions to the uniformity of the stream, and of course a sound in the pipe corresponding to their frequency. Except, however, the tongue is so constructed as to be capable of vibrating in unison or nearly so with at least one of the modes of vibration, (as 1 to 2, 1 to 3, 1 to 4, &c.) of

the columns of air in the pipe, the sound of the reed only will be heard; the resonance of the pipe will not be called into play, and the pipe will not *speak:* or will speak but feebly or imperfectly and yield a false tone. (See ORGAN.)

3 *By a mouth hole* or *embouchure.* We will consider what takes place, when the vibrations of the column of air are excited by blowing over the open end of a pipe or an aperture in its side. To do it effectually, the air must be directed in a small current not *into* but *across* the aperture, so as to graze on the opposite edge; like blowing over the end of a key to produce a sound. By this means, a small portion of air will be caught and turned aside down the pipe, thus giving a first impulse to the contained air and propagating down it a pulsation in which the air is slightly condensed. This will be reflected at the end, and return to the opening, where the condensation goes off into the free atmosphere. In so doing, it lifts up and for a moment diverts from its course the infringing current. The moment it has escaped, the current resumes its former course, again touches the edge of the aperture, creates there a condensation, and sends downwards another vibration, and so on. Thus the current passing over the aperture, is kept in a constant state of fluttering agitation, alternately grazing and passing free of its edge, at regular intervals, equal to those in which a vibration can run over twice the length of the pipe, or in any of its modes of vibration, and thus a uniform sound is produced.

8 *To produce the different harmonic sounds,* by blowing into the pipe, as for instance a flute, it is only requisite to begin with as gentle a blast as will make the pipe speak, and gradually to augment its force. The fundamental note will be heard first, and

as the strength of the blast increases, it will grow louder and louder, until at length the sound all at once starts up an octave, that is, an interval between notes whose vibrations are as 1 to 2. By blowing still harder, the next harmonic 1 to 3 or the *twelfth*, is heard; but no adaptation of the mouth hole or force of the wind, will produce any note intermediate between these. The next harmonic is 1 to 4 or the *fifteenth* of the fundamental. The next 1 to 5 or the *seventeenth* or double octave of the major third. The next 1 to 6 or the *nineteenth*. All the notes here enumerated are very readily produced on the flute, without changing the fingering, from the lower D upwards, merely by varying the force of the blast, and a little humoring the form of the lips and their position with respect to the mouth hole. Trumpets are played on this principle.

9 The *reason* of the continual subdivision of the vibratory column as the force of the blast increases, is very obvious. A quick sharp current of air is not so easily turned aside by any disturbing force, and when so turned aside, returns more rapidly to its original course, than a slow feeble one. Consequently, on increasing the force of the blast, a period will arrive, when the current cannot be diverted from its course and return to it so slowly as is required for the production of the fundamental note; the next higher harmonic will then be produced; until the force of the blast increasing, it becomes once more incapable of sympathizing with the vibrations of this mode, and another harmonic will be produced; and so on.

10 From the above observations, we learn, that it is not the passage of the air through the pipe which produces the sound, but the sudden impulse given to the air in the tube to make it vibrate. A very small quantity of air is sufficient for this purpose. Hence

in playing the flute, for instance, the chief difficulty lies in the proper direction and force of the blast; and in singing, on the proper management of the breath. (See *Taking* Breath.)

PIPER, a performer on a pipe. Pipers were formerly a class of itinerant musicians, who performed on a variety of wind instruments, as the bagpipe, musette, &c.

Organ PIPES. (See *Organ* Pipes.)

PITCH, the particular degree of elevation of a musical sound, or its gravity or acuteness, in distinction from its tone which depends on the construction of the sonorous body. The pitch of the opera and concert rooms is taken from A. The pitch has been insensibly raised in modern times, to the great detriment of voices. The great bell in Lincoln, England, which was originally C, is now A, showing that the pitch has been raised a minor third. The opera pitch is higher than the concert pitch. The pitch of the ancient modes and scales we have not the means of determining.

PITCH PIPE, a small wind instrument made of wood, blown at one end, and closed at the other by a movable graduated stop, on the side of which the letters and semitones are marked; by drawing this stop, any sound of the chromatic scale may be given. The pitch pipe is used for the purpose of giving the key note when no instruments are used; and to give the correct pitch in tuning instruments.

PIU, (Ital.) more, rather, a word of comparison and augmentation; as, *piu forte*, louder than the previous phrase.

Il PIU, (Ital.) the most; as, *il piu forte possible*, as loud as possible.

PIU TASTO, (Ital.) rather; as, *piu tasto presto*, rather quick.

PIZZICATO, (Ital.) a word used in violin music, signifying that the performer is to strike the strings with his fingers in imitation of the harp, instead of using the bow, until *col arco* occurs.

A BENE PLACITO, (Ital.) at pleasure; according to the will of the performer.

PLAGAL, imperfect, opposed to authentic. (See MODES and CADENCE.)

PLAIN, simple, in opposition to figurative and ornamental.

PLAIN CHANT, } old ecclesiastical music with
PLAIN SONG, } equal notes and without harmony. (See CHANT.)

PLECTRUM, (Lat.) a small pointed stick or quill bent at each end, formerly used instead of a bow or the fingers, in agitating the strings of instruments.

PLICA, a character used in old music as a sign for pausing, and also as a point of addition.

PNEUMATIC, relating to the air or wind.

PNEUMATICS, the science which treats of the properties and effects of air.

POCO, (Ital.) a little, a word of comparison; as, *poco allegro*, somewhat brisk.

POCO A POCO, (Ital.) by degrees, by little and little.

POCO PIU, (Ital.) a little more; as, *poco piu allegro*, a little quicker.

POI, (Ital.) then; as, *piano poi forte*, soft, then loud.

POINT, (see DOT;) a mark anciently used to distinguish the notes of harmony. (See COUNTERPOINT.)

POLLACA, } a Polish dance in 3:4 time, in
POLONAISE, } which the emphasis is laid on the unaccented part of the measure.

POMPOSO, (Ital.) grand, dignified, in a pompous style.

PONTICELLO, (Ital.) the bridge of a violin, &c.

IL PONTICELLO, (Ital.) an appellation given to that precise part of the voice, where the natural tone forms a juncture with the *falsetto.*

PORTAMENTO DI VOCE, (Ital.) the manner of conducting the voice. The portamento is said to be good, when the notes of a passage are blended in a close *legato* manner, and the voice pure. The term is also applied to an ornament used in vocal music, or an easy sliding in passing from note to note. The slide is a grace of much simplicity and beauty, evidently drawn from nature: it expresses the most tender and affectionate emotions. We hear it in those little gusts of passion which mothers use in caressing their infants; and in the language of nature, it is one of our most endearing tones. This effect is produced by a gradual raising or falling of the voice from any given tone to the next, in one unbroken stream of sound. On the violin, it is produced by simply sliding the finger in close contact with the string, during an even drawn bow. The portamento is an easy mode of sliding from one note to another; hence, second rate singers find it a convenient method of encountering those notes which lie at remote and awkward distances. In some voices, it is so fixed by habit, that two measures cannot be sung without it. When so used, it utterly destroys good singing, by interposing an effect of the most disgusting kind; when used with discretion, it adds much to the force of expression. (See ORNAMENTAL NOTES.)

POSITION OF A CHORD, a term applied to the various dispositions of the notes of a chord, while the base remains the same. (See CHORDS 30, p. 88.)

POSITION OF THE HAND, *in violin playing*, indicates the place of the hand on the neck of the in-

strument, according to the key or scale of the music: *in piano forte* and *organ playing*, the place of the hand to reach the notes of the successive chords, with ease and promptness. (See PIANO FORTE.)

PRACTICAL MUSICIAN, a musical performer and composer, in distinction from a theoretical musician.

PRECENTOR, the master of the choir, or leader of the chant. *(not used.)*

PRELUDE, (Lat. *præ*, before, and *ludo*, to play,) a short introductory composition or extemporaneous performance, to prepare the ear for the succeeding key and movements. In psalm tunes, the best prelude is the tune itself.

PREPARATION, that disposition of the harmony by which discords are lawfully introduced. A discord is prepared, when the note which forms it, occurs as a concord in the previous chord.

PRESTISSIMO, (Ital. superl. of *presto*,) as quick as possible, the quickest movement in music.

PRESTO, (Ital.) very quick. (See MOVEMENT.)

PRIMA DONNA, (Ital.) the first female singer in an opera.

PRIME, (Lat. *primus*, the first,) the same sound, unison.

PRIME NUMBERS, are such as cannot be divided without a remainder; as 7 and 5.

PRIMITIVE CHORD, a chord whose lowest sound is the fundamental, in distinction from a derivative or inverted chord.

PRIMA, } (Ital.) the first; as, *violino primo*, the
PRIMO, } first violin, *prima vista*, the first singer.

PRIMO TEMPO, (Ital.) in the original time, used after an *accelerando* or *ritardando*.

PRINCIPAL, an organ stop. (See ORGAN.) The

word is also used adjectively for chief; as, *principal violin, principal chord, principal key*, &c. (which see.)

PRINCIPALE, (Ital.) the leading part of a piece of music.

PROFESSOR OF MUSIC, one who being familiar with the theory and practice of music, gives lessons and lectures on the same.

PROGRESSION, a regular succession of chords or movement of the parts, a term belonging to harmony: as distinguished from modulation, it is applied to harmony which does not digress from the original key. (See HARMONY, *Enchaining of chords*, p. 172.)

PROLATION, a method used in old music, for determining the value of semibreves and minims.

PROLONGATION, same as Suspension or Syncopation. (which see.)

PROPOSTA, (Ital.) the subject of a fugue.

PROSLAMBANOMENOS, (Gr. *proslambano*, to annex,) the lowest sound in the ancient Greek system, equivalent to A in the base; so called because it was occasionally added below to make the octave to the upper note of second tetrachord.

PROSODIA, (Gr.) a sacred song or hymn, sung by the ancients in honor of the gods.

PROSODY, a term relating to the accent and metrical quantity of syllables, in lyrical compositions. *(little used.)*

PROVA, (Ital. proof,) a rehearsal.

PSALM, a holy song, a lyrical and sacred composition either in prose or verse. The word is now confined to the Psalms of scripture, or to the versification of them. Psalms appear to have been originally intended chiefly for private devotion, and accompanied with a stringed instrument; though some of them were prepared for public occasions. This species of vocal composition, composed by David and

other holy inspired poets, is of the highest degree of perfection, and was introduced into the public worship of the Jews in Jerusalem. According to Eusebius, Psalms were introduced into the christian churches by the Emperor Constantine.

PSALMIST, a composer or singer of psalms, an appellation applied exclusively by divines to David, the 'sweet singer' of Israel.

PSALMODY, (Gr. *psalmos*, a sacred hymn, and *ode*, a song,) sacred music with poetry taken chiefly from the Psalms. Psalmody has ever formed a principal part of religious worship, both among Jews and Christians. The practice of singing the psalms of David, Asaph, and others, in the religious assemblies of the Jews, was universal, down to the time of the christian era; and they were translated and sung in christian assemblies, as early as the year 383, though they were not turned into meter. Metrical psalmody appears to have had its origin in Germany; and most of the old melodies of the church were first set by German musicians. It does not appear, however, that in that country, it at first gained admission into public worship; but was for a long time confined to family devotion, especially among the reformed. Luther, who was a good musician, is known to have regularly practised psalmody with his friends, every evening after supper. It was about the year 1517, that he introduced psalmody into the religious services, which not only kept alive the enthusiasm of the reformers, but formed a rallying point for their followers. This practice was encouraged in Germany, France, and Holland, before it was introduced into England. But as it spread, it reached England also, and soon after six thousand persons might have been heard singing together at St. Paul's Cross, in London. Luther was a poet as well as a musician; but the

same talent existed not in his followers. The first English version of the Psalms was commenced in the reign of Henry VI, by Thomas Sternhold of the king's household, who versified about fifty of them: and in 1562, the psalter was completed by John Hopkins, a schoolmaster, assisted by Mr. Whittyngham, an English divine. Soon after the publication of this version of Sternhold and Hopkins, psalmody was introduced into the church service; and various musical manuals appeared, for the purpose of facilitating its practice. Among the authors and publishers of which, no one was more assiduous than John Playford, whose "Introduction to Skill of Music," "Psalms and Hymns in *four parts*, on the Common Tunes," and other publications of a similar nature, entitle him to be considered, in some respect, the father of modern psalmody. The melodies sung were chiefly German, those which the good taste of Luther supplied. But the puritans of a subsequent age nearly destroyed these germs of melody; assigning as a reason, that music should be so simplified as to suit all persons, and enable all voices to join. A specimen furnished by Dr. Burney, is written in long notes, most of which are on one line, with an occasional digression of one degree both above and below. Since that time, psalmody has ever proved a bond of union among christians. In the English church, it has made but little progress, owing to the retention of the version of Sternhold and Hopkins. Dissenters have greatly surpassed the church divines, in furnishing poems for this part of our worship. The versifications of Dr. Watts, and those of some others are euphoneous, sweet, and flowing; but those of Tate, Merrick, and even of the pious Doddridge, by their ill chosen words, often refuse alliance with musical sounds. Had the poetry of Watts, called forth the

strains of such organists, as Croft, Green, and Boyce, we should have had psalmody, that would have lived for ages. Instead of which, the piety of the dissenters has been allied to the most unholy strains, and we have been deluged with a psalmody composed of light and impious trash. As an instance of which, we may quote the Easter hymn, 'Christ the Lord, is risen to day,' affixed to a Tyrolese waltz. In this country, our compilations of psalm tunes have too often been made by persons destitute both of science and taste, and we may add of piety; into which songs of a light and irreverent character and often vulgar associations, have been introduced. But more recently, psalmody including both the hymns and the tunes of a proper character, has been introduced, and is now extensively patronized; though we regret that works having no just claim to merit, have still an extensive circulation. For the principles which should guide us in the selection and use of hymns, we refer to the introduction of "Church Psalmody." As to the music we remark,

I. *The character of the tunes should accord with the sanctity of the place and of the occasion.* An erroneous impression is apt to prevail, especially in churches destitute of an organ, that none but loud rapid melodies can rouse the attention of the people. Their attention may indeed be aroused, but whether their edification is promoted is questionable. The mind ever ready to please itself with worldly associations, and yield a blind admiration to mere skill, can receive little spiritual profit from compositions, that partake neither of the solemnity of the services they are intended to support, nor of the reverence that becomes the house in which they are performed. Not only do such pieces fail to promote edification, but continually violate the principles of correct mu-

sical taste. The great body of American psalm tunes which, a few years since, were extensively used, and which abound in miserable attempts at fugue and imitation, are entirely beneath criticism: they have noise and that is all. They possess none of that exquisite blending of sound and idea, which lingers in the affections, and in moments of thoughtfulness and serious musing, is ever at hand to soothe or to enliven. Again, it has not been uncommon for well intentioned persons who have been captivated by some secular melody of the day, to introduce it into the church, and so deem that 'they are doing God service.' Now it may not be asserted that a tune is *in itself* necessarily defiled by the character of the composer, or its primary design; it is barely possible that its complexion may not be unsuited to the sanctity of the service to which it is applied; yet the associations connected with it are sufficient to render it a most unfit medium of spiritual communications. Almost equally objectionable is the attempt to accommodate detached portions from the well known works of great masters, by altering and mutilating them. 'The heavens are telling the glory of God,' is a well known and ludicrous example of this manner of manufacturing psalm tunes. But perhaps the most absurd and ridiculous instance of this kind, is a psalm tune taken from the passage, 'A new created world springs up to view at God's command,' and which is found in a recent publication. The idea of a beautiful melody may be borrowed from such passages, and clothed in a new style to please and edify; but unless it is done by persons of science and correct taste, it is extremely hazardous.

II. *Psalm tunes should be such as to allow all the congregation,* even the most uncultivated *to unite.* For this purpose, they should generally be of a de-

liberate character, without divisions or several notes occurring to one syllable; and the intervals from note to note made in the most natural manner. Hence, the tunes should not only be grave, but simple and flowing in their design. The opposite practice is one cause why the ground has been almost exclusively occupied by the choir. Let music become simple and intelligible, and it will soon wind itself into the affections of the people. Repetitions particularly such as divide a line, are also out of place in psalmody. In those tunes in which a part of a line is successively repeated, in addition to their entire destitution of musical effect, divisions of a line are often so made as to produce a ludicrous effect.

III. *They should be free from monotony and dullness.* It may be imagined, that the species of tune recommended above, cannot possess life and energy, so necessary to sustain the popular attention. This objection would have some force, did not such simple but majestic tunes admit of variety. But neither harmony nor melody are impaired by suitable variations of time and force. Nay, such simplicity in the melody is absolutely essential, to allow the singer to give that variety to the expression which the sentiment requires. Variety may also be given to the tunes, and unequal notes may be used, provided the measures are uniform, and single notes occur for each syllable. We are happy to say, that a work founded on these principles, has been recently published and already become extensively popular; and is we think destined to exert a powerful influence in musical improvement. We allude to "The Choir," published under the patronage and influence of "The Boston Academy of Music."

IV. *In the selection of tunes, the subject or sentiments of the psalm or hymn should be chiefly con-*

sulted. This must be left with the chorister or leader. The character of choristers, and their usual defects, we have already pointed out. (See CHORISTER and CHOIR.) He should not only consult the subject matter of the hymns, but also the difference of times, seasons, and places. Where the performers are numerous, the plain choral tunes are the most suitable. As a guide to a proper selection, the compilers of many of our hymn books, have prefixed a tune of suitable character; but this can only be a sort of general guide, as different choirs cannot give the same expression to the same tune. The only general direction we can give is, that the tune should be adapted for expression, not for display.

V. *The performance should be dignified and destitute of all ornaments.* (See CHOIR.) The words should be distinctly spoken, the vowel sounds only prolonged, and the consonants quickly but distinctly articulated. (See "Manual of Instruction.") Different words or phrases should not be interwoven, nor the parts of a word or simple phrase separated. All verses should be divided into phrases, and pauses made, as was directed for the Modern Chant, p. 63. The musical phrases generally terminate at the end, and near the middle of each line. Many of our hymns phrase so badly, and the words and sentiments are so destitute of lyric character, that a chorister of piety and taste is often at a loss for a suitable tune. And well he may be, for no psalm tune can avail for giving expression to such. The clergyman often appears to forget that he is selecting hymns to sing; and seems to be guided in the selection, by a principle the very opposite to the correct one; that is, his hymns are didactic addressed to the understanding, instead of pathetic addressed to the feelings. (See Introduction to "Church Psalmody.")

PSALTERY, a stringed instrument used by the ancient Hebrews, somewhat resembling a harp.

PULSATILE, an epithet for any instrument which is sounded by beating, such as the drum, bell, &c. (See PERCUSSION.)

PULSATILE ACCOMPANIMENT, an accompaniment consisting of regular and monotonous repetitions of the chords, particularly adapted to display the powers of the singer, either in airs of expression or of rapidity.

Q.

QUADRATO & QUADRO, (Ital.) the natural ♮.

QUADRILLE, a modern dance of a lively character; the music consists of three strains of eight measures each, played in quick time.

QUADRUPLE COUNTERPOINT, a term applied to music of four parts, so arranged that either may be made the base.

QUADRUPLE MEASURE, a measure with four parts. (See MEASURE.)

QUART FAGO'TTO, a bassoon a fourth below the usual scale of that instrument.

QUARTER, a crotchet. (See CHARACTERS Ex. 7)

QUARTER TONE. (See INTERVALS.)

QUARTET, a composition in four parts, each of of which is obligato, and performed by a single voice or instrument.

QUARTETTO, (Ital.) a quartet.

QUARTO, (Ital.) the fourth; four parts.

QUASI, as if, like; as, *andante quasi allegretto*, andante like or nearly as fast as allegretto.

QUATUOR, (Fr.) a quartet.

QUAVER, an eighth note. (See CHARACTERS.)

QUICK STEP, a march in quick time, written in 2:4 or 6:8 measure.

QUINTET, a composition in five obligato parts, each performed by a single voice or instrument.

QUINTETTO, (Ital.) a quintet.

QUINTO, QUINTA, (Ital.) the fifth; five parts.

QUINTOLE, fives. (See CHARACTERS 22, Ex. 38.)

QUIRE. (See CHOIR.)

R.

R. Abbreviation of right hand; and when written over a note or passage in the base part, shows that it must be played with the right hand passing over the left.

RADDOLCENDO, (Ital.) gradually softening, making more soft and sweet.

RALLENTANDO, (Ital.) same as Lentando.

REAL, same as Essential.

RECITANTE, (Ital.) in the style of a recitative.

RECITATIVE, a species of music between singing and speaking, or musical declamation in which the singer uses the inflections and tones of the speaking voice. As melody is the poetry of music; so recitative may be considered the prose, in which the performer is not restricted in sound or time, so long as he keeps to the harmony of the measure. This *aria parlante* is common to all the nations of the east. The Jews to this day read the scriptures in a singing

tone; and the Koran and all the religious books are chanted in India. (See CHANT.) The perfection of a recitative depends on a happy choice of words, in which different emotions are expressed; nor should the melody of the words betray the singer into those cries and psalmodic tones, which render the language flat and inarticulate. Its character should be that of force and distinctness; and it may be said that *we recite the best when we sing the least.* The recitative is syllabic, that is, each note has a syllable, and each emphatic syllable and long note should fall on the accented part of the measure. Ornaments are set aside. The *simple* recitative, accompanied only by a base or the simple chords, is not confined to strict time, but is left to the taste of the singer, whom the listening accompanist follows. The *accompanied* recitative, on the other hand, in which different instruments are used, must be sung in strict time. The *measured*, introduced into the middle of the simple recitative, to mark some particular passage and reinforce the expression, in which some wind instrument as the horn is used, often produces a good effect. Recitative is generally written in common quadruple measure, and in the key of C; the modulations being so frequent, as to render it useless to put any signature at the clef.

RECITATIVO, (Ital.) recitative.

RECITATIVO INSTRUMENTATO, (Ital.) recitative accompanied.

RECITATIVO SECCO, (Ital. *secco*, dry,) recitative unaccompanied.

RECTE, (Lat.) forwards, applied to a canon; as, *per recte et retro*, by direct and retrograde movement at the same time.

REDOUBLED (See DOUBLED.)

REED, the little movable tube, forming the mouth

piece of reed instruments and pipes. The name reed is applied also to the tongue attached to the mouth piece, by which they are blown. In the hautboy, clarinet, and bassoon, the tongue is a thin piece of elastic wood drawn to an edge: in the *reed stops* of an organ, it is a thin piece of brass inserted within the mouth of each pipe. (See ORGAN, p. 280.) The tongue should be even, thin, and very elastic; and so situated as to vibrate freely, and not strike against the side of the pipe. When this is done, the sound will be peculiarly sonorous and mellow; but striking against the side makes it harsh and disagreeable.

REEDY TONE, a term applied to the notes of the voice, which resemble the sounds produced by a reed instrument.

REEL, a Scotch dance in quick time, generally in the quadruple measure of four crotchets.

REFRAIN, the burden of a song, or a continual return to the first part, as in a *rondeau*.

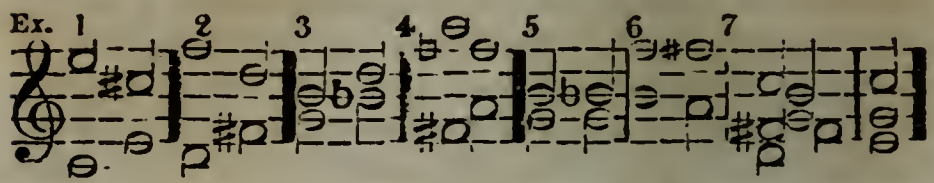
REGLE DE L'OCTAVE, (Fr.) rule of the octave, (which see.)

REHEARSAL, the private execution of any music by the performers, in their several parts, previous to public representation. Rehearsals especially of new music, are indispensably necessary, not only to ascertain that the parts are correctly written, and the performers exact, but to afford the composer or conductor an opportunity of explaining to the performers the spirit and design of the piece, and of making such alterations and improvements as the effect may suggest.

RELATED CHORDS are such as have one or more notes in common. (See HARMONY & CHORDS.)

FALSE RELATION, a term applied to the progression of two parts, the notes of which belong to two different keys; or in which the same note after

occuring as natural or according to the key in one part, immediately appears in the other part raised or lowered a semitone, Ex. 1 to 4.



This was formerly forbidden; the alteration was required to be in the same part, as in Ex. 5 and 6. But in modern music, the rule is often violated, especially in full harmony, Ex. 7. In duets, however, the relation should be true.

RHYTHMICAL RELATIONS, those relations which the longer notes of a measure bear to the shorter. Every measure is supposed to be divided into parts corresponding to the shortest notes or to the parts of measures, of which the longer notes are said to contain a certain number. Thus, if in a 4:4 measure, a quaver occurs, it is said to be in quaver relations, of which a pointed crotchet is said to contain three parts. (See "Manual of Instruction.")

RELATIVE KEYS are those which, by reason of the affinity of the principal chords, admit of an easy and natural transition into each other. The term is usually applied to those major and minor keys which have the same signature, called the *relative major*, and *relative minor*; the latter of which is a minor third below the former. Thus, C major and A minor are relative keys.

RELIGIOSO, (Ital.) in a serious, solemn style.

REMOTE, distant, not related.

REMOTE KEYS, keys not related, or which have no principal notes in common. (See KEYS.)

REPEAT. (See CHARACTERS 39, Ex. 31.)

REPERCUSSION, frequent repetition of the same sound.

REPLICA, (Ital.) a repeat.

REPLICATO, (Ital.) repeated.

REPRISE, a repeat; also used for cadenza.

REQUIEM, (Lat.) rest; a funeral service in Roman catholic countries, composed and performed for the repose of a departed soul; taken from a mass which begins with the words, '*Requiem æternum*,' eternal repose.

RESOLUTION, the passage of a discord into a concord, according to the rules of harmony. (See Discord.)

RESONANCE, resounding; a term applied to the augmentation and continuation of a sound, whether by means of a sound board, by the reaction of a column of air, or by curved surfaces so situated as to return the sound like an echo. It is well known, that if we sing near the aperture of a wide mouthed vessel, some one note which is in unison with the air of the vessel, will be reinforced and augmented, and sometimes to a great degree. A thin glass vessel has been known to be broken, by making before its mouth a loud explosive sound in unison with the mass of the contained air. This is what has been termed the *resonance* of the mass of air contained in the vessel or the resonance of the cavity. This has been known from the earliest times. (See Pipes.)

To RESOUND, (Lat. *sono*, to sound, and *re*, back or again,) to return or repeat the sound.

RESPONSE, a piece of music in which the performers sing by turns.

REST, a mark for a cessation of sound, equal in duration to the note in whose place it stands. (See Characters 40, Ex. 15.)

RETARDATION, the holding on to one or more notes of a chord, thus suspending the succeeding chord. (See Suspension.)

RETRO, (Lat.) backward ; an epithet applied to the subject of a canon, when so constructed as to admit of being sung in a retrograde direction.

RETROGRADE COUNTERPOINT, (Latin, *gradus*, a going, and *retro*, backward,) a term applied to a composition so arranged that it can be performed not only from beginning to end, but also from the end to the beginning.

To REVERSE, to invert the order of the parts, or to place the higher part or treble in the place of the lower part or base ; *in fugues*, it means that the answer is given by contrary motion to the subject.

RHOMBOID, a character <> placed over a note, indicating that the sound is to be increased and then diminished. (See DYNAMICS.)

RHYTHM, (Gr. *rhythmos*,) *among the Greeks*, the word, in its most general sense, denoted the proportion of all the parts of any whole to one another, and to that whole ; whence it was used to denote the difference of movement in the voice, which results from the relative duration of sounds : this was determined by the quantity of long and short syllables, of which their singing was simply the expression. *Among the moderns*, in vocal music, it is merely accommodating the long and short notes to syllables, so as properly to separate the words, and give due force to the accented syllable ; *more generally*, the management or disposition of music with regard to time, measure, and accent, and the regulation of cadences. Rhythm may be regarded as the soul of music, as the effect of a piece depends much on the strict observation of time.

RIBATTUTA, (Ital. *ribattere*, to strike,) a species of ornamental singing of which every note is struck in a *staccato* manner.

RICERCARI, (Ital.) the early name for *fantasia ;*

the term was also used for difficult fuguing exercises for the voice or for instruments.

RICH, an epithet for compositions, which are elaborately and ingeniously combined; and which, in performance, produce an elegance and fullness of effect.

RIDOTTO, (Ital.) an entertainment consisting of songs and dances, introduced into England in 1722.

RIFIORIMENTI, (Ital.) embellishments or additional notes inserted by a vocal or instrumental performer, to set off the simple notes of a melody.

RIGADOON, (Fr. *rigadon*,) a lively dance performed by a single couple; the tune of which was originally borrowed from Provence in France.

RIGOLL, an old instrument consisting of several sticks bound side by side, and separated by beads; it was played by being struck with a ball fixed at the end of a stick.

RINFORZANDO, (Ital.) growing stronger and stronger, increasing the sound on a long note or on several notes. (See Dynamics, and Crescendo.)

RINGERS, persons who are in a habit of ringing church bells for amusement. In large cities in England and this country, the practice of ringing bells in *change*, or striking them alternately in a certain order, is common. In London, societies are formed for this purpose.

RIPIENO, (Ital.) full, in chorus; applied to those auxiliary parts which are occasionally introduced to fill up the chorus, but are silent in the solo movements. In distinction from *obligato*, it is applied to parts not the principal.

RISOLUTO, (Ital.) resolute, in a bold decided style; a species of performance by which the notes of a passage should not glide into each other, but be struck in a measure independently.

RISVEGLIATO, (Ital.) in a brisk and joyous manner.

RITARDANDO, (Ital.) making slower; retarding the time for the sake of effect. (See Movement.)

RITORNELLO, (Ital.) a term applied to a short introductory symphony to an air, and to a short symphony or repetition of a few notes at the end of each verse and of the song. *(little used.)*

RIVERSO, (Ital.) (See Rovescio.)

RIVOLGIMENTO, (Ital. *rivolgere*, to turn,) the changing or inversion of the subject in double counterpoint.

ROLL, } a term applied to that rapid pulsa-
ROLLING, } tion of the drum, by which the sounds so closely succeed each other, as to beat upon the ear with a rumbling continuous sound.

ROMANCE, formerly the name given to the long lyric tales, sung by the minstrels. (See Romanza.)

ROMANESCA, (Ital.) } an old lively Italian
ROMANESQUE, (Fr.) } dance. (See Gaillarde)

ROMANZA, a sweet and plaintive melody irregular though refined, adapted to romantic poetry.

RONDO, (Ital.) } a round; a composition in
RONDEAU, (Fr.) } which the first strain is repeated at the end of each of the other strains.

RONDOLETTO, (Ital. dimin.) a short easy rondeau.

ROOT, the fundamental note of a chord; the sound from which all others take their rise.

ROSALIA, (Ital.) a frequent repetition of the same passage, each time a note higher or in different keys; which becomes very tiresome when injudiciously introduced.

ROTE, a mere repetition of words and sounds. *To sing by rote*, is to perform tunes guided solely by the ear; a practice which may be resorted to by a

judicious teacher, for the sake of giving pliancy to the voice; under other circumstances, it can by no means be recommended.

ROULADE, (Fr.) a passage consisting of running notes; but particularly applied to a rapid flight of notes extemporaneously introduced as an ornament.

ROUND, a vocal composition of the fugue kind, in which the different performers successively sing the same parts throughout after each other; a species of perpetual canon. See Ex. of a round, p. 58.

ROUNDELAY, (Fr. *rondelet*,) a species of poetry in which the first first line is regularly repeated at the end of each verse; an air appropriated for dancing, the first part of which is repeated in the rondeau style. Old English poets use this word to signify simple rural strain, both short and lively.

ROVESCIO, (Ital. the reverse,) and,

AL ROVESCIO, (Ital.) a melody performed from right to left or from the end to the beginning. The term is also applied to a contrary motion in the parts of a composition; as, *canone al rovescio*, a canon by contrary motion.

RUBATO, (Ital.) robbed, stolen. (See TEMPO RUBATO.)

RUDIMENTS OF MUSIC, the first elements or principles of music.

RULE OF THE OCTAVE, a method of accompanying, with particular chords, the base notes of the scale ascending and descending. It was invented by Delaire in 1770. (See *Figured* BASE, pp. 32, 33.)

RULED PAPER, paper on which staffs are ruled for the purpose of writing music.

RUSTIC, an epithet applied to a song whose words have reference to rural life, and whose melody is rude and familar.

S.

S. An abbreviation of *Solo*.

SACBUT, an old base wind instrument resembling the trombone.

SACRED MUSIC, music composed for public worship or private devotion, such as Oratorios, Masses, Anthems, Chants, Hymns, and Psalms, (which see,) in distinction from secular music. Anciently, music appears to have been exclusively appropriated to sacred purposes. The religious services of the ancient Jews and of their contemporaries the Egyptians, and subsequently of the Greeks, appears to have been performed in a chanting tone, which is to this day continued by the Jews. From the Jews, the early christians borrowed the custom and transmitted it to their successors. (See CHANT and *History of* MUSIC.) The Catholics perform their masses entirely in a singing tone, interspersed with music both vocal and instrumental of a most splendid character. They have ever patronized music, and have enlisted the talents of the greatest masters, such as Haydn and Mozart, in the composition of the most finished and effective sacred pieces, such as Masses and Oratorios, (which see.) In early life, Haydn perceived the barrenness of the ancient church music, and the profane luxuriousness of the modern Italian masses, and felt, that to compose sacred music as it really should be, he must work on a system entirely different. He borrowed therefore few ideas from dramatic music; but preserving by the solidity of his harmony, some resemblance to the fine and solemn airs of the ancient school, and of the German hymn

tunes, he introduced melodies solemn and tender, and at the same time dignified and brilliant, accompanied with rich harmony, and sustained by a grand orchestra. In his sacred airs, he permitted but occasional graces and ornaments, which happily relieve from time to time the general loftiness and magnificence of his sacred style. In the English church, the composition of anthems has chiefly occupied the highest musical talents. But we are not to look to the elaborate compositions of masses, oratorios, or anthems, for music to edify the great mass of christians. Their intricate modulations and discords are entirely above their comprehension. Hence, we are to look to psalmody, simple and chaste psalmody, as the kind of music required by the times, for the edification of christians. Owing to the illyrical character of the hymns in the English church, but little attention has yet been by them paid to psalmody. In our own country, though much remains to be done, we trust an impulse has been given, which will not cease, until psalmody takes that high stand in religious worship that its lofty character demands. (See PSALMODY.)

SALMO, (Ital.) a psalm.

SALTERELLA, (Ital. *salto*, a leap,) a kind of jig, the dance for which consists of leaping motions; the time is 6:8, and the notes are pointed, which gives it a jumping character.

SALTO, (Ital.) a leap. (See LEAP.)

SALVE REGINA, (Lat. hail queen,) a song addressed to the Virgin Mary.

SANCTUS, (Lat. holy,) the name of a particular part of a mass. (See MASS.)

SARABAND, a slow dance, in triple time, whose character is majestic and expressive; it much resembles the minuet, but is more grave and measured: one of its distinguishing features, is the lengthening of

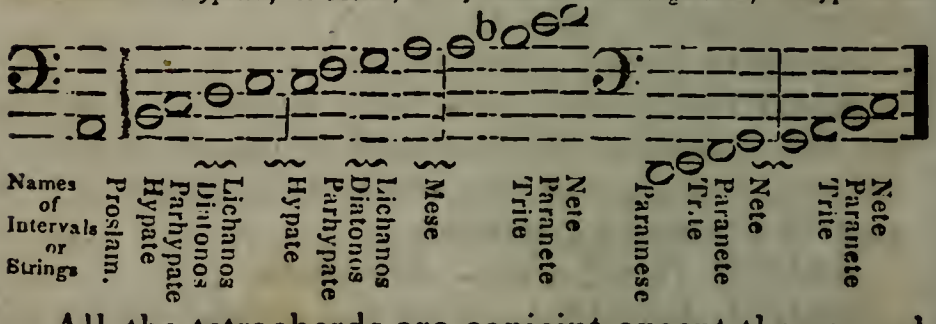
the second note of the measure. The saraband is of Spanish origin, generally accompanied with the *castanets*. Some suppose the Spaniards borrowed it from the Saracens or Moors.

SCALE, (Ital. and Lat. *scala*, a ladder,) a regular series of sounds, ascending or descending by certain intervals. We shall give an account of,

First; THE ANCIENT GREEK SCALE, the enumeration of all the sounds of their system. As our great scale is made up of octaves, theirs was made up of tetrachords. In repeating our octaves, the highest sound of one is made the lowest of the next above, or the octaves are conjoint: the ancients, in repeating their tetrachords, sometimes placed them disjointly, and sometimes conjointly; two tetrachords placed conjointly constitute a minor seventh, and disjointly an octave. The Greek scale embraced but two octaves, in which were included four different tetrachords, besides the proslambanomenos; as follows:

ANCIENT GREEK SCALE.

Tetrachords: I Hypaton, II Meson, III Synemenon or Diezeugmenon, IV Hyperboleon.



All the tetrachords are conjoint except the second and third, or the third and fourth. The two tetrachords, marked III, do not properly both belong to the scale, but are different positions of the same tetrachord; the first form being conjoint with II and disjoint with IV, and the second being disjoint with II and conjoint with IV.

In *naming* the intervals or strings of the scale, the

name of the tetrachord was annexed to the name of the string; thus, *hypate* [*chorde*] *meson* [*tetrachordon,*] the principal [string] of the middle [tetrachord.] The following is an explanation of the different Greek terms.

Diatonos, diatonic. (which see.)

Diezeugmenon, (*dia*, asunder, and *zeugmenos*, united.) disjoined, separated; the third tetrachord disjoined from the second.

Hypate, (superl. of *hyper*,) chief, principal; the lowest string of tetrachord: and,

Hypaton, the lowest or principal tetrachord.

Hyperbolcon, (*hyper*, above, and *ballo*, to cast or put,) the highest tetrachord; as this was added above long after the others were formed.

Lichanos, (the index or fore finger,) applied to the third string, because it was touched with that finger.

Mese, (middle.) the middle string of the scale; and,

Meson, the middle tetrachord.

Nete, (the last,) the most acute string of a tetrachord, which the Greeks considered the lowest

Paramese, (*para*, next to,) next string above the *mese*.

Paranete, next string to the *nete*.

Parhypate, next string to the *hypate*.

Proslambanomenos. (see that word.)

Synemenon, (*syn*, with, and *emenos*, placed,) joined; the third tetrachord conjoined to the second.

Trite, (the third,) the third string of the tetrachord.

The names of the intervals or strings are in the singular number, agreeing with *chorde* understood: and the names of the tetrachords are in the genitive plural, agreeing with *tetrachordon*, i. e. four strings.

Of the *ancient Chromatic* and *Enharmonic* scales, we have no information to be depended upon. An improvement of the ancient scale was made by Guido, about the year 960; who added another note below, which he called *hypo*-[below]*proslambanomenos*, (see *Gamut*,) and another tetrachord above; thus the scale extended from G the lowest line in the base staff, hence called G gamut, to E fourth space treble staff. Though the modern system of seven sounds (see NOTATION) was then known, yet he arranged the scale

in seven hexachords, severally commencing on G, C, and F, the latter of which had B flat. (See SOLMIZATION.) Since the time of Guido, the scale has been gradually extended both upwards and downwards, and divided into conjoint octaves; and flats and sharps have been introduced. (See HISTORY OF THE ORGAN.) This leads us to speak of

Second; THE MODERN SCALES, which, in theory, and in voices and perfect instruments, are of three kinds, the *diatonic*, *chromatic*, and *enharmonic*.

I. DIATONIC SCALE, a scale which proceeds by the natural tones and semitones of the octave; or thus, in the major mode C or natural scale: Ex. 1.

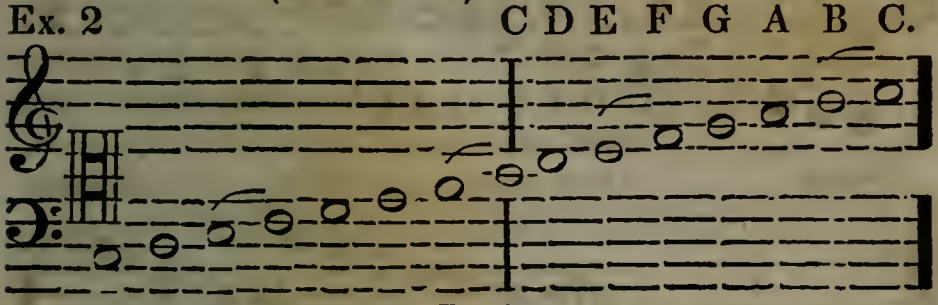
C to D to E to F to G to A to B to C;
Tone Tone Semitone Tone Tone Tone Semitone.

that is, by two tones, a semitone, three tones, and another semitone: thus embracing seven intervals, and including the two extremes eight notes. As we have seen, (see NOTATION,) every succession of seven sounds both above and below, is but a replication of the preceding; hence, but seven letters are used to represent the intervals of the *great scale*, that is, the scale made up by the repetition of the above seven intervals, Ex. 2 and 3 below. When all the notes of this natural or diatonic scale are sounded in succession, whether upwards or downwards, the effect is universally acknowledged to be pleasing. The ear rests with perfect satisfaction on the fundamental note, and the intervals succeed each other gracefully, and with sufficient variety to avoid monotony. Accordingly, all are agreed in adopting this scale as the foundation of music. It consists of seven distinct notes, for the eighth being the octave of the first, is regarded merely as the repetition of it. If we add to the above scale, on both sides, the octaves of all its notes above and below, and also the double

octaves and so on, we may continue it indefinitely upwards and downwards. But the ear cannot follow these additional sounds to an unlimited extent. (See Ear.)

1 *Scale applied to the staff*, in which the position of the notes beginning with C, is determined by the clefs. Ex. 2. (See Clef.)

Ex. 2



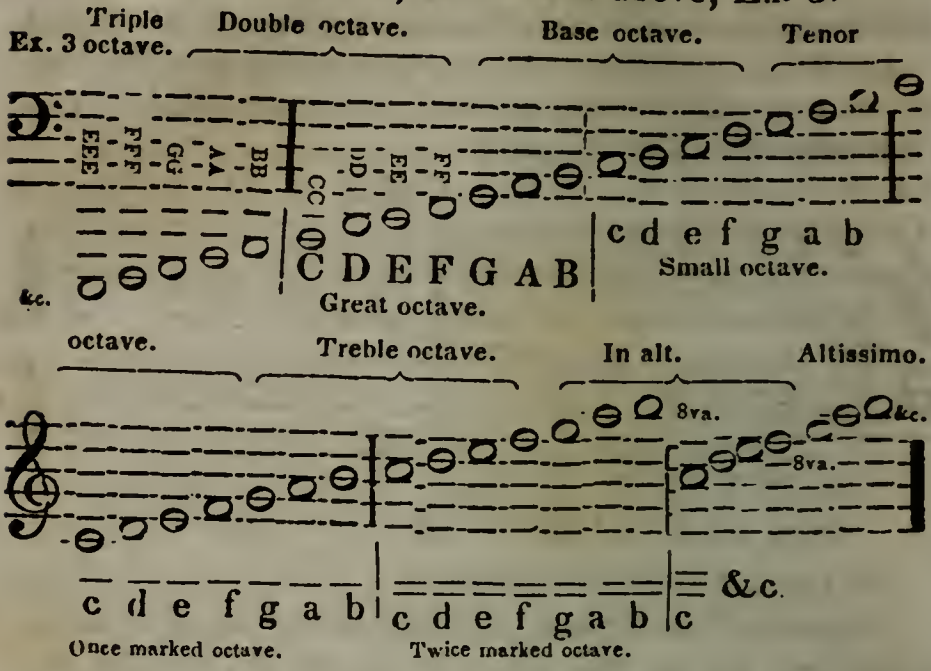
The ties represent the semitones.

Instead of the letters, the Italians make use of the syllables, *do*, *re*, *mi*, *fa*, *sol*, *la*, *si*, *do*, for the degrees of this staff; and the French the same, except that they retain *ut* instead of *do*.

2 *Description of the different octaves.* The different octaves of the great scale are differently designated. The octave below C in the base is sometimes marked with capitals, and called the *great* octave; the next octave is marked with small letters, and called the *small* octave; the third has small letters with a dash over or under, called the *once marked* octave: the next, the *twice marked* octave, and so on; as shown by the letters below the notes, Ex. 3. But the more usual method is to commence with G on the first base line: the first octave above that letter is called the *base* octave; the next, the *tenor* octave; the third, the *treble* octave; then, the octave *in alt;* and finally, the octave *in altissimo:* the first octave below base G, is called the *double* octave, and marked with doubled letters, as, CC,

called double C; the next, the triple octave marked EEE, &c.; and so on, as marked above, Ex. 3.

Ex. 3



3 *Naming the intervals of the scale*, which applies to but a single octave, or the intervals of each octave have the same names applied to them. Ex. 4.

Signs.	1	2	3	4	5	6	7	8
Names of the intervals.	1st Tonic	2d Supertonic	3d Mediant	4th Subdominant	5th Dominant	6th Submediant	7th Subtonic or Leading note	8th Octave Tonic.

In the natural scale, 1 is C, 2 is D, &c. The word *Tonic*, is applied to 1 because it is the *tonic* or key note of the scale.

Supertonic means next above the tonic. (*super* above.)

Mediant, middle or half way between the tonic and dominant.

Subdominant, next below the dominant. (*sub* under.)

Dominant, the governing note, (which see.)

Submediant, middle between the tonic and subdominant below.

Subtonic, next below the tonic, and *Leading note*, because it leads to the tonic.

The *Octave* is the tonic of the next scale or octave above.

4 *Key note.* By the aid of the ascending and descending series of sounds, in the natural scale thus obtained, pieces of music perfectly pleasing, both in point of harmony and melody, may be formed; and they are said to be in the *key* of that which is assumed as the fundamental note of the scale, or which is represented by 1. The note thus taken as 1 is called the *key note* of the piece. But in pieces or movements of considerable length, the ear requires a variety of key; (see MODULATION:) and to prevent monotony, different pieces of music require, for the same reason, to be written in different keys, which is called,

II. TRANSPOSITION OF THE SCALE. As every major scale, whatever note is taken as one, must consist of two tones, a semitone, three tones, and another semitone, (see I above and MODE,) we cannot transpose without altering some of the intervals; which is done by means of flats or sharps. (See CHARACTERS 23 and 43.) Thus, if we take 5 or G, 1 as of a new scale, and arrange the letters according to the tones and semitones in Ex. 1 and 2 above; we shall find, that from F to G is a tone, when it ought to be but a semitone; consequently we must take F sharp for a leading note. Ex. 4.

Ex. 4 Key of G or 1 ♯.

G	A	B	C	D	E	F♯	G
1 T.	2 T.	3 S.	4 T.	5 T.	6 T.	7 S.	8

This scale may also be extended both upwards and downwards by conjoint octaves. If we now take five of this scale or D as one of a new scale, we shall find it necessary to sharpen F and C, thus:

Ex. 5 Key of D or 2 ♯s.

D	E	F♯	G	A	B	C♯	D
1 T.	2 T.	3 S.	4 T.	5 T.	6 T.	7 S.	8

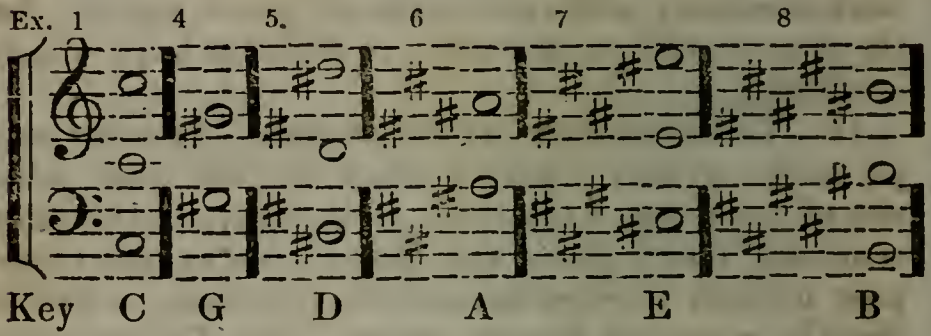
In the same manner, by again taking 5 as 1 of a new scale, we get the following:

Ex. 6 Key of A or 3♯s. { A B C♯ D E F♯ G♯ A
1 T. 2 T. 3 S. 4 T. 5 T. 6 T. 7 S. 8

Ex. 7 E or 4♯s. E F♯ G♯ A B C♯ D♯ E

Ex. 8 B or 5♯s. B C♯ D♯ E F♯ G♯ A♯ B

Thus we have introduced sharps into all the whole tones, in the following order, viz. F♯, C♯, G♯, D♯, and A♯. We will now apply the above examples to the staff, prefixing the signatures, and inserting the key note.



Sometimes, in modulations, other sharps still are used; but on keyed instruments, the notes thus raised are equivalent to the next notes above: thus, B♯ is the same as C, and F♯♯ or x is the same as G.

In the above examples, in order to introduce the sharps regularly, we have each time taken 5 as 1 of a new key; but if we take 4 each time as 1 in the same manner, we shall find it necessary to introduce flats in regular order, as follows:

Ex. 9 Key of F or 1b. { F G A B♭ C D E F
1 T. 2 T. 3 S. 4 T. 5 T. 6 T. 7 S. 8

Ex. 10 B♭, or 2bs. B♭ C D E♭ F G A B♭

Ex. 11 E♭, or 3bs. E♭ F G A♭ B♭ C D E♭

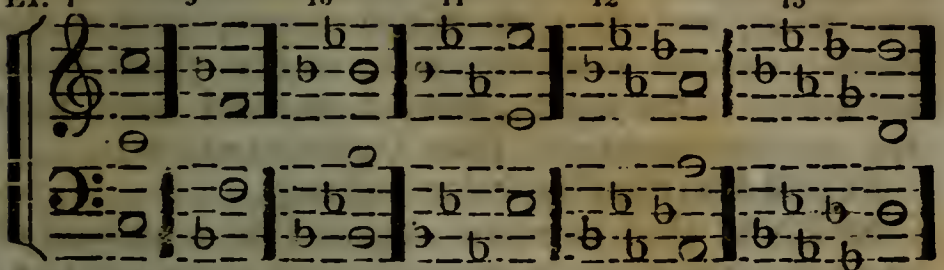
Ex. 12 A♭, or 4bs. A♭ B♭ C D♭ E♭ F G A♭

Ex. 13 D♭, or 5bs. D♭ E♭ F G♭ A♭ B♭ C D♭

Thus, the flats in their order are, B♭, E♭, A♭,

and Gb. Other flats are sometimes used, as sharps are. The keys applied to the staff are as follows:

Ex. 1 9 10 11 12 13



Key C F Bb Eb Ab Db

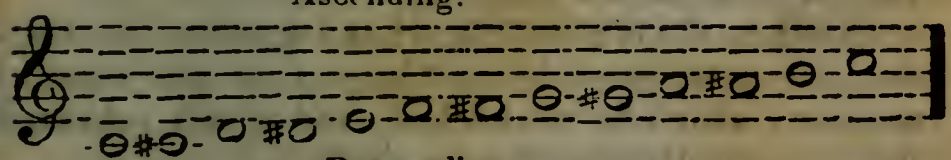
III. Chromatic scale. The interval between any note and the same note sharped or flatted, is called a minor or *chromatic* semitone; but the semitone between notes on different degrees of the staff, is called major or *diatonic*. A scale made up of such semitones, is called the *chromatic scale;* as in the following example, in which large S stands for the diatonic semitone, and small s for the chromatic. Ex. 13.

C s.C♯ S. D s.D♯ S. E S. F s.F♯ S. G s.G♯ S. A s.A♯ S. B S. C
S.D ♭s. S.E♭ s. S. S.G♭ s. S.A♭ s. S.B♭ s.

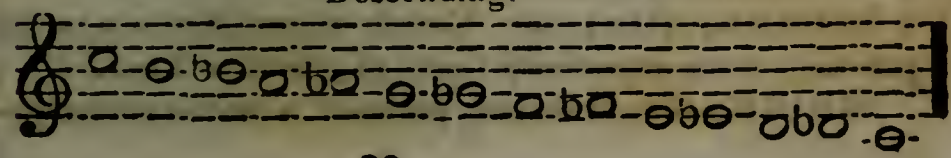
Thus, the octave is divided into twelve semitones, five chromatic and seven diatonic; and includes thirteen notes. Passages in which chromatic semitones occur, are called *chromatic passages*. In ascending, sharps are generally used, and flats in descending. Ex. 14.

Chromatic scale.

Ascending.



Descending.



IV. ENHARMONIC SCALE. Strictly speaking, the sharp of a note is not precisely the same as the flat of the note above; and this distinction is made by the voice, and by perfect instruments, such as the violin; but on imperfect instruments whose notes are fixed, as the organ, piano forte, and flute, they are not distinguished. (See TEMPERAMENT.)

SCEMANDO, (Ital.) diminishing.

SCENA, (Ital.) a scene; applied to a portion of an opera comprised in any one entire composition, consisting of a recitative, a slow movement, and followed by a spirited air; it may be for one or more voices.

SCENA DA CAMERA, (Ital.) vocal chamber music.

SCENIC MUSIC, music adapted to the drama.

SCHEME, a term used in ancient music, to express the varieties arising from the different positions of the tones and semitones in chords or the scale.

SCHERZANDO, (Ital.) in a playful manner, with more roundness of tone than emphasis.

SCHERZO, (Ital. play, sport,) playful, sportive.

SCHISMA. (See INTERVAL, 41.)

SCIOLIST, (Lat. *scio*, to know,) a smatterer; one who pretends to teach the use of every musical instrument.

SCIOLTO, (Ital. untied,) free, florid; implying that the notes must be performed in a free, distinct and rather detached manner.

SCOLA CANTORUM, (Lat.) a school for singers; the name given by St. Gregory to the musical seminary which he established, and which subsisted three hundred years after his death.

SCOLIA, (Gr.) the Greek name for songs in general, more especially those of a festive kind.

SCORE, the different parts of a vocal or instru-

mental composition which are intended to be performed at the same time, placed one above the other, with the corresponding notes and measures directly over each other; so that the eye catching the corresponding bars of the several staffs, sees at a glance the whole construction of the harmony. One line of music requires as many staffs as there are parts; and the several staffs are comprehended by a brace. The name *score* originated from the lines for the bars being drawn quite through all the parts of a composition. The use of the score is indispensible in composition, to ensure a time keeping performance.

SCOTCH SCALE, a scale differing from the common, by the omission of the fourth and seventh; a peculiarity from which all the genuine Scottish melodies derive their national character.

SCOTCH TUNES, music peculiar to the North Britons; the characteristic sweetness of which is in a degree attributable to their consisting of the diatonic degrees unmixed with chromatic.

SCOZZESE, in the Scotch style.

To SCREAM, to force the voice, particularly on the high notes, beyond its natural volume, or to sing so loud that the tones cannot be distinguished. By judicious practice on the notes within the natural compass, a voice of but moderate volume may if skilfully managed be sufficiently heard.

SDEGNATO, SDEGNOSO, (Ital.) disdainfully.

SDRUCCIOLATO, (Ital. *sdrucciolare*, to slide, to trip,) sliding the nail of the finger over the keys.

SECOND, an interval of two degrees. (See INTERVAL 42.)

SECOND PART, a part subordinate and below the principal part or air, designed to enhance the effect. In the formation of second parts, we have a decided proof of the composer's tact and ability.

SECOND STRING, the smallest but one on instruments played with a bow.

SECONDO, SECONDA, (Ital.) second.

SECTION, a portion of a melody formed by two regular phrases, the last of which is terminated by a cadence; the section is named *tonic* or *dominant* according to its termination.

SECULAR MUSIC, music not sacred, (see SACRED MUSIC) such as Operas, Songs, Glees, Catches, Sonatas, &c.; whatever is composed for the theatre or chamber.

SEER, the ancient name of a bard or rhapsodist.

SEGNO, (Ital.) a sign or mark, thus, :𝄋: denoting a repeat. (See REPEAT.)

AL SEGNO, (Ital.) to the sign; these words placed at the end of a strain, signify that the performer must begin again at the sign of repeat, and finish at the double bar.

SEGUE, (Ital.) it follows; as, *segue coro*, the chorus follows; *segue* placed after a group of notes, implies a repetition of the group. See Ex. 16 and 17, p. 11.

SEMI, (Lat.) half; prefixed to the name of an interval, it denotes that the interval is diminished half a tone.

SEMIBREVE, (*semi*, and breve,) the longest note used in modern music. (See CHARACTERS 41, Ex. 5.)

SEMI-CHORUS, a short plain chorus to be performed by a few of the best singers, in opposition to full chorus.

SEMIDIAPENTE, the diminished fifth. (See SEMI and DIAPENTE.)

SEMIDIATESSARON, the diminished fourth.

SEMIDITONE, the minor third. (See SEMI and DITONE.)

SEMIQUAVER, half a quaver. (See CHARACTERS, 42, Ex. 9.)

SEMITONE, half a tone. (See INTERVAL 43.)

SEMITONIC SCALE. (See *Chromatic* SCALE.)

SEMPLICE, (Ital.) with simplicity; without ornament or affectation.

SEMPRE, (Ital.) always, throughout; as, *sempre piano*, soft and light throughout the strain.

SENSIBLE, an epithet applied by the French to the sharp seventh of any scale, because it gives the ear an expectation of the key note, by which it is generally followed.

SENTENCE, a strain introduced as an interlude between the parts of the service of the church.

SENZA, (Ital.) without; as, *senza organo*, without the organ.

SEPTET, SEPTUOR. (See SETTETTO.)

SEPTOLE, a group of seven notes, in the time of a crotchet.

SEQUENCE, a regular ascending or descending succession of similar chords; as, a sequence of sixths, or sequence of alternate chords of sixths and common chords.

SEQUENTIA, (Lat. *sequens*, following,) certain hymns in the Romish church, in which measure and quantity are neglected; formerly sung *after* the *graduale*, hence the name. At the present day, only three are retained, *Victimæ paschali*, to the paschal Lamb; *Veni, Sancte Spiritus*, come Holy Spirit; and *Laudi Sion salvatorem*, praise to Zion's deliverer.

SERENADE, (Ital. *sereno*, serene, clear, quiet; Lat. *sero*, in the evening,) a concert vocal or instrumental, performed at night in the open air, under the window of the person or party to be entertained; also the music for a serenade.

SERENATA, (Ital.) a vocal composition on an amorous subject; also a lover's vocal serenade.

SERPENT, a wind instrument which derives its name from its curvilinear shape, consisting of several folds or wreaths, usually covered with leather. It is a base instrument of a strong but coarse tone, used chiefly in military bands to strengthen the low notes: it may be introduced with good effect into a full orchestra, and is sometimes used as an accompaniment in full chorus. It has a mouth piece similar to the horn, and like that instrument, many of its notes are harmonics of particular fundamental notes. It has six holes for the fingers; and in its modern improved state, it has also several keys. Its compass extends from CC the same as the lowest note of the violincello but of a much fuller tone, to G in the treble staff; though by a modification and skilful management of the blowing, it may be made to extend down to Bb, and up to B or D in the treble. The same directions apply to the blowing of it, as the horn. (See HORN, and for its scale, see WIND INSTRUMENTS.)

CHORAL SERVICE, that part of religious worship which consists in singing and chanting.

SESQUI, (Lat.) a whole and a half, or three halves.

SESQUIALTERA, a compound organ stop, used only in the upper part of the scale. (See ORGAN.)

SESQUITONE, a minor third consisting of three semitones.

SESTETTO, (Ital., Lat. *sex*, six,) a composition for six parts, each for one voice or instrument.

SET, a short phrase.

SET TO MUSIC, a term applied to any lyric verse, to which music is added.

SETTETTO, (Ital.) a composition for seven voices or instruments, one on each part.

SETTIMA, (Ital., Lat. *septem*, seven,) the seventh.

SEVENTH. (See INTERVAL and CHORD.)

SEXTET, SEXTUOR. (See SESTETTO.)

SEXTOLE. (See SIXES.)

SEXTUPLE, sixfold; a term applied to time, denoting six equal parts in a measure. (See MEASURES.)

SFORZANDO, SFORZATO. (See FORZANDO.)

SHAKE. (See ORNAMENTS.)

SHARP. (See CHARACTERS 43, Ex. 24, and INTERVALS.)

To SHARP, } to raise a note half a tone by
To SHARPEN, } means of a sharp.

SHAWM, an instrument used for sacred purposes by the ancient Hebrews, supposed to be similar to a horn.

SHELL. Some shells when blown into, produce musical sounds. The ancients supplied shells with distended strings, and thus converted them into musical stringed instruments.

SHIFT, the motion of the hand along the finger-board of a violin, violincello, &c. necessary in the execution of passages, the notes of which in point of gravity or acuteness, lie at a considerable distance from each other.

SHORT OCTAVES, an appellation given to the lower octaves of some organs, because from the omission the intermediate notes, the extreme keys lie nearer to each other than those of the full octaves.

SHRILL, an epithet applied to those acute, clear, and penetrating sounds which form the upper part of the scale of treble voices and instruments.

SI, (Lat.) if: (Ital.) an indefinite pronoun, as *they* and *it*, in the terms, '*they* say,' '*it* is he.'

SICILIANO, (Ital.) a movement in 6:8 time, usually with alternate crotchets and quavers, in a simple pastoral style, rather slow and graceful, and of a soothing and tender character.

SIDE DRUM, a drum suspended at the side. (See DRUM.)

SIGNATURE, the flats or sharps, placed at the commencement of each staff, to mark the key of the movement. (See CHARACTERS and SCALE II.)

SIGNATURES OF CHORDS, the figures and other characters written over or under a base, to indicate the harmony. (See *Figured* BASE.)

SIGNS, the general name for all the different characters used in music, (see CHARACTERS:) also, figures for the accompanying chords of bases.

SILENCE, synonymous with rest. (See REST.)

SIMILAR MOTION. (See MOTION.)

SIMILE, (Ital.) in a similar manner; this word and its plural *simili*, is placed over passages which require a similar manner of bowing or fingering. (See Ex. 18, p. 11.)

SIMPLE, in opposition to compound, double, figurative, elaborate: as, *simple Interval*, *simple Fugue*, *simple Counterpoint*, *simple Concord*. (which see.)

SIMPLE SOUND, a pure unmixed sound.

SIMPLICITY, *in composition*, a natural, unadorned melody or incomplex combination of parts, in which the composer endeavors, rather by the force of his genius and feeling than by the refinements of science, to awaken the softer emotions, or rouse the mind to ardor. *In execution*, simplicity is that chaste unaffected style which rejecting all vain and unmeaning flourishes, only aims at conveying the ideas of the composer, without disturbing the purity of the original.

SINFONIA, (Ital.) symphony.

SINGER, one who makes singing his pursuit. A good singer, besides a cultivated ear and taste, should have a complete knowledge of the principles of music.

SINGING, the art of producing with the voice,

the notes of any melody, and of uniting the sounds with the words adapted to it. A clear articulation is one of the principal requisites for singing, otherwise vocal becomes mere instrumental music. (See VOICE and SOLMIZATION, and "Manual of Instruction.")

SINGING MASTER, a musician whose business it is to teach singing.

SINISTRA, (Ital.) the left hand.

SIXTH. (See INTERVAL and CHORD.)

SKIP, the passage between two disjoint notes.

SKIPPING NOTES, notes which do not proceed by conjoint degrees, nor in any regular course, but which lie at awkward and unexpected distances from each other.

SLENTANDO, (Ital.) (See LENTANDO.)

SLIDE (See PORTAMENTO.)

SLUR. (See CHARACTERS 49, Ex. 44.) A slur drawn over two notes on the same degree, denotes that they are to be gently struck and closely connected: *in vocal music*, it indicates that either one or more syllables may be sung to such slurred notes. When several notes are slurred, the first only is to be accented, and the others performed smoothly and connectedly. Slurs are also drawn over various figures of notes, such as phrases to be repeated, and the different closes of a movement commonly marked 1 and 2.

SMORZANDO, } (Ital. *smorzare*, to extinguish,)
SMORZATO, } diminishing the sound until it is entirely lost.

SOAVE, (Ital.) in a soft, sweet, engaging style. (See DOLCE.)

SOGGETTO, (Ital.) the principal subject or theme.

SOLFAING, singing the notes of the scale to the syllables, *do*, *re*, &c.

SOLFEGGIAMENTO, (Ital.) a composition intended as an exercise for singing at sight, of which the syllables, *do*, *re*, *mi*, *fa*, *sol*, *la*, *si*, form the subject.

SOLFEGGIO, (Ital.) an exercise for the voice upon syllables instead of words. (See SOLMIZATION.)

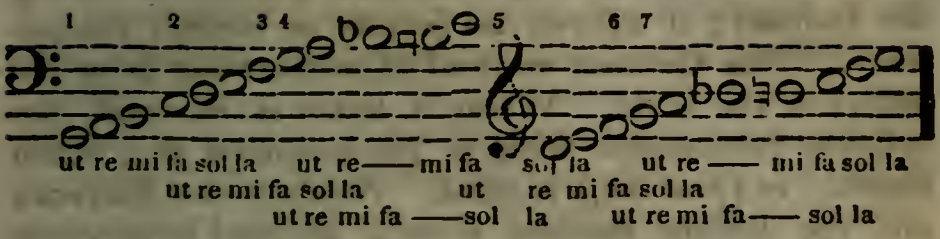
SOLI, (Ital. plu.) a word used to signify that each part should be performed by a single voice or instrument.

SOLLICITO, (Ital.) in a pathetic style, in a careful and exact manner. *(not used.)*

SOLMIZATION, (*sol*, and *mi*,) the application of particular syllables to the notes of the scale. This method of singing the notes of the scale, is as ancient as the scale itself. The Greeks applied the syllables *ta* (tah,) *tee*, *to* (toe,) and *te* (tay,) to the four notes of their tetrachord. Guido substituted his hexachord in the place of the Greek tetrachord, to which he applied the six syllables, *ut*, *re*, *mi*, *fa*, *sol*, *la*. These syllables were suggested to his mind, by hearing the following hymn of St. John performed, in which the notes of the first syllables in the successive lines, formed a regular ascending series of the six sounds of the hexachord.

UT queant laxis RE-sonare fibris
MI-ra gestorum FA-muli tuorum,
SOL-ve polluti LA-bii reatum.

The scale of Guido (see SCALE I,) to which he applied the six syllables of his hexachord, consisted of two octaves and a half, in which no accidental was used except B flat. As his hexachord contained only one semitone between *mi* and *fa*, it was necessary that it should have as many positions as there were semitones, viz. seven, or three in each octave, as in the following example.

HEXACHORDS OF GUIDO.

To show the connexion of his hexachords with the Greek tetrachords, and also his method of using them, Guido invented the figure of a left hand, with the syllabic signs for three hexachords marked on the joints of the fingers. This system of solfaing was rendered very complicated by using, in the progress of an air, different syllables for the same note. These different positions and names, or the method of passing from one hexachord to another, was learned by the *gamut*.

Though it was known by Guido, and for centuries previous (see NOTATION,) that every succession of seven sounds is similar one to the other, yet the thought of having seven syllables for the scale never occurred until the seventeenth century, when *si* was introduced by the French. This improvement though so very simple and important, was for a long time rejected by the Italians as an innovation; and though in general use by other nations, it was not introduced by them until the close of the last century; and even now the hexachord is used by some. Instead of *ut*, the Italians have introduced *do*, as being more smooth and melodious, which is also used by the English; but the French retain *ut*. By the French and Italians, the syllables are used in the place of our letters, and not transposed with the scale, (see SCALE;) thus with them, *do* or *ut* is always C, *re* is D, *mi* is E, *fa* is F, *sol* is G, *la* is A, and *si* is B. The only advantage of this method, is in vocalizing or acquiring

purity of tone, which is the chief excellence among the Italians; it affords no facility in correct intonations. The *German* method of solmization is by the letters of the scale. When a letter is sharped, the syllable terminates with *is* (pronounced *ee*;) when flatted, *es* (pro. *ay*,) is used. Neither the German nor the Italian method is well adapted to produce ease in passing from interval to interval, as they afford but an imperfect idea of the relative position of the tones and semitones. Among the *English*, but four syllables *fa*, *sol*, *la*, *mi*, were for a while used, which practice is still common in this country. The same objection lies against this system as the above, with regard to the position of the semitones. At present, the Italian method is somewhat prevalent; but the more common and much the best method, is to use the seven Italian syllables, and always apply *do* to *one* of the scale whether natural or transposed; (see SCALE III.) Thus the semitones are always between *mi* and *fa*, and *si* and *do*. By thus applying these syllables to the several notes, the practitioner not only utters the sound with more fulness and ease, but attains a ready recollection of the places of the tones and semitones; and by feeling the relation between the syllabic and the musical sounds, acquires the power of expressing them with certainty and firmness. The following are the syllables with their proper pronunciation; *do* (doe,) *re* (ray.) *mi* (mee,) *fa* (fah,) *sol* (sole,) *la* (lah,) *si* (see.) In chromatic passages, for a sharped interval, the termination of the syllable is changed to *i*, pronounced *ee;* as *di* (dee,) *ri* (ree,) *fi* (fee,) *si* (see,) &c.: for a flatted interval, it is changed to *e* pronounced *ay;* as, *se* (say,) *le* (lay,) *me* (may,) &c. Other methods of solmization have been sometimes used, but they are of too little consequence to need distinct mention.

SOLO, (Ital.) alone, as, *flauto solo*, the flute alone; a composition for a single voice or instrument, sometimes attended with a base or simple accompaniment.

SONATA, (Ital.) an instrumental composition, consisting of several movements calculated to display the powers and expression of the instrument for which it is written, either with or without accompaniments. It is for instruments, what *cantata* is for voices. The sonata generally begins with an *adagio*, and after two or three movements of various descriptions, concludes with an *allegro* or *presto*. In modern music, the *sonata* is chiefly composed as a lesson or exercise for a single instrument.

SONATINA, (Ital. dimin.) a short easy sonata.

SONG, a short lyric poem generally on agreeable subjects, to which music is added, to be sung on familiar occasions. The use of songs seems naturally to follow from the use of words. The ancients had the art of singing before writing; and their laws and histories were sung long before they were inscribed. They had songs adapted to all the various conditions and circumstances of life; which in all rude nations, and among the common people, have continued to the present day. (See Ballad.) Thus associating circumstances and events of life with pleasing songs, has a great influence in the formation of character; hence, the melody and words which children learn, should be such as will leave a good impression on the heart. (See Introduction to the "Manual of Instruction.") Further remarks of the subject of songs we make, under the head,

National SONG. It is a generally received opinion, that most countries have a music of their own, the character of which may be called national. Probably this is true as it regards the music of instruments, but certainly not with that which emanates from the

voice. The strains of the Irish and the Welch may be referred to the harp; the dance tunes of the Spanish, to the guitar; the mountain airs of the Swiss, to the hunting horn; and the music of the Turks, to the rhythmical clangor of the ancient Greeks. The primitive tones of the human voice are much the same in all countries. Formerly, the bards, trombadours, and minstrels were the welcome guests of kings and princes, who showered on them the greatest favors; and as they wandered from court to court, they sowed the seeds of science, and spread a musical taste. Prior to this, songs could have been little better than the mere tones of the voice, expressing the sensations of the heart, oftener springing from melancholy feelings, than from those of joy.

With shepherds and persons in rural life, either in the valley or by the hill side, songs have always proved a source of pleasure, in whiling away time, or in conveying tender sentiments to those for whom they have an affection. The Scotch not having mingled with the musicians of the continent, have preserved the ancient character of their music, more than any other country. The pathetic effects of which may be ascribed to the use of the minor key; which was anciently much used. On the introduction of accompaniment, the voice surrendered its predilection for the minor key; and the major so natural to joyous instruments, disputed its ascendency. Melody, however, has been much improved by the alternate use of those keys, and none more so than that of the Scotch. The national songs of Europe are but few. France has her '*Charmante Gabrielle;* Spain, '*Les folies d'Espagne;* and Venice, her boat songs, (see GONDOLIERS:) from the latter, the Italians have caught that flowing ease which marks the beauty of their melody. The most ancient English songs are of

a grave cast, and commonly written in the key of G minor; specimens of which are still heard among the common people. If the English can set up any claim to originality, it is in their glees and anthems. Dr. Percy, in his learned essay on the ancient minstrels, informs us, that a class of these persons were called *gleemen*, who no doubt were the first that performed vocal music in parts. The earliest pieces of this kind on record, are by the madrigal writers, and were probably founded on the taste of the Italian school. (See GLEES.) Compositions for the church were not set to English words, until the time of Tallis about 1560, since which the anthem has been brought to the highest degree of perfection in England. (See *History of* MUSIC.)

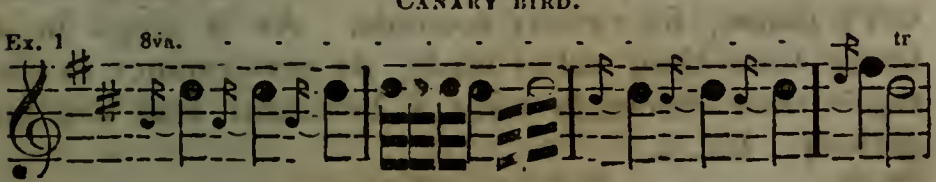
SONG OF PRAISE, a song composed and performed in honor of the Creator.

SONG OF SONGS, a name given, by way of preeminence, to Solomon's song.

SONG OF TRIUMPH, a vocal composition dedicated to the celebration of a victory.

SONGS OF BIRDS. The tones of the smaller birds are so lofty, and above the reach of the obtuse ear of man, that it is impossible for us to appreciate them. But the mezzo notes of birds can be more readily caught and reduced to musical intervals. The following are the notes of a canary bird, which may be considered as the medium height of its song. Ex 1.

CANARY BIRD.

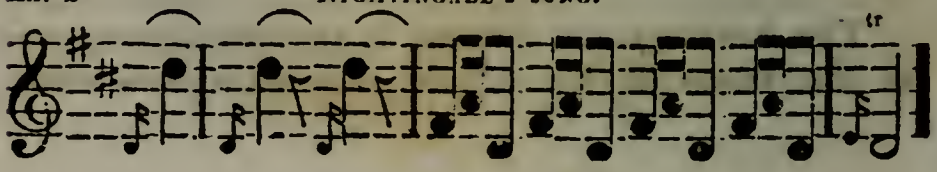


The lowest notes belong to the cormorant, who is the basso of his tribe. His capacious chest,

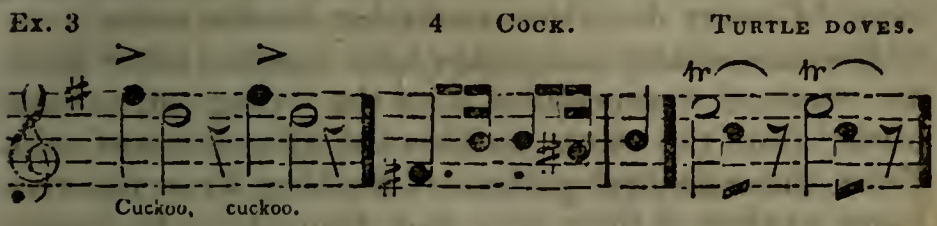
when filled with air, enables him to keep under water longer than any other bird; and from the same cause also, he makes the deepest tones. Their monotonous trombone notes on B flat in the base, may ever be heard among the rocky cliffs of North Wales. None of the larger birds properly sing, their noises being generally confined to one or two notes. One probable reason is, that their size would betray their lurking places, and expose them to their enemies, if by a loud song, they should attract attention. Persons who have not attended to the subject, suppose that every bird of the same species sings the same song; but although there is a general resemblance, many varieties may be noticed, particularly among the more expert, as the mocking bird, who appears to learn entirely by imitation. Their notes are probably no more innate, than language in man, but depend on the master under whom they are bred; which in their wild state is the parent bird. Hence wild birds are more uniform in their songs than those which are tame. Wild birds commonly sing but seven or eight months in the year; while those caged, and well fed and attended, sing most of the year. It is the male only that sings; the female of no species ever does.

The *nightingale* has been almost universally considered the most capital of singing birds. Its superiority consists in the following particulars: its tone is mellow, though by exertion, it can be made extremely brilliant; and it can continue its song without a pause, for twenty seconds. As it sings in a lower tone than other birds, its performance in the night time resounds with a beautiful and solemn melody. Ex. 2.

Ex. 2 NIGHTINGALE'S SONG.



The song of the *cuckoo*, without which we can scarcely call it spring, consists of two notes, which have been found to be in the key of D. Ex. 3.



The *parrot*, like the cuckoo, forms his notes deep in the throat, and shows great aptitude in imitating the human voice. The *owl* invariably howls on a single note on B flat. Of all the feathered tribe, the crowing of the cock is the most shrill and sonorous. Before the dawn, when every thing is still, he may be heard at the distance of three or four miles. His cry consists of five notes, generally in the key of B; Ex. 4 above. By his crowing, he has been distinguished in every age, as the countryman's cock, and 'larum; as the watchman that proclaims the divisions of the night. The gallant chanticleer has at his command his amorous phrases, and his terms of defiance, as well as his song. Who has not noticed his noble gallantry in the midst of his mates? With what a soft and courteous tone he invites his party to a feast, and with a politeness that would do honor to man, presents to each a favorite grain. Animals so gifted probably enjoy the pleasures of conversation and society. We might refer to the various noises of the hen; her clamorous joy after she has laid her egg; her cluck, cluck, to keep her straggling brood about her; her chattering cry, which they understand as a call to partake of the food she has found; and her noise of alarm to warn them of danger. Domestic fowls have a brisk and lively note in the morning; but in the evening, they loiter

and have a drawling tone. As the shades draw on, the cooing doves, in mournful mood, begin their song, Ex. 5 above; which Haydn has copied in the Creation, 'Cooing dove that seeks her tender mate.'

Unquestionably musicians have derived many hints for musical composition from the 'song of earliest birds,' from the sweet warble of their woodnotes wild. From these natural exclamations, they draw the vivifying strokes of their art; and from these fragments of rhythm and melody, they form the most pleasing and diverting compositions. Many of which may be found, in the music, particularly instrumental, of Handel, Mozart, Haydn, Beethoven, and Rossini. The songs and notes of many birds are very aptly written down by Gardiner, (see "Music of Nature,") as well as instances of their use by great composers; which refutes the idea that the songs of birds cannot be reduced to musical intervals.

SONGSTER, a singer.

SONGSTRESS, a female singer.

SONI MOBILES, (Lat.) movable sounds; a term anciently applied to the two intermediate sounds of the tetrachord, so called on account of their being differently tuned or altered with the mode.

SONI STABILES, } (Lat.) fixed sounds; a
SONI STANTES, } term applied to the extreme sounds of the tetrachord, so called because in the various modes they remained fixed. (See Modes.)

SONNET, a lyrical composition properly consisting of fourteen lines, the first eight of which are alternate rhymes.

SONNETTO, (Ital.) a sonnet. The sonnet is of Italian origin, the invention of which is attributed to Petrarch. Who first gave it an English dress, is not certainly known; but Milton has left us twenty three examples, among which is one addressed to the musician Laws.

SONOROUS, sounding; an epithet applicable to whatever is capable of yielding sounds, but more especially to those bodies natural or artificial which produce musical sounds.

SOPRA, (Ital.) above, on; as, *sopra una corda*, on one string.

SOPRANIST, a treble singer.

SOPRANO, (Ital.) the highest female voice; *plural*, Soprani. (See Voice.)

Con SORDINI, (Ital.) with mutes: mutes enfeeble the sound, change its nature, and give music an affecting and melancholy character.

SORDINO, (Ital.) a mute. (which see.)

SORDO, } (Ital.) damped; as, *oboe sordo*, the
SORDA, } damped hautboy; which is done by means of cotton or sponge placed in the bell.

SOSPIRO, (Ital.) indicates a rest equal to a crotchet. *(little used.)*

SOSTENUTO, (Ital.) sustained; signifiying that the notes are to be sustained or held on to their utmost length, without the least wavering, generally used in slow movements. To accomplish this with the voice, great attention must be paid to the management of the breath; which may be so improved by practice, that it is possible to sustain a sound with perfect evenness for more than a minute. On the violin, this is effected by an even drawn bow.

SOTTO, (Ital.) under, below; as, *sotto il sogetto*, below the subject.

SOTTO VOCE, (Ital. in an under tone,) with a moderate and rather restrained tone of voice.

SOUND. I. Nature of sound. The vibrations of all bodies, if of a proper degree of frequency, and of sufficient force to be communicated through the air or any other medium to our organs of hearing, produce sounds whose pitch depends on their fre-

quency, and their force and quality on the extent and other mechanical circumstances of the vibrations, and the nature of the vibrating body. (See PERCUSSION.) Every motion communicated to the air, is propagated onward like a wave; but in order to effect the ear so as to produce an audible sound, a certain force and suddenness is necessary: thus, the slow waving of the hand through the air is noiseless; but the sudden removal and return of a portion of air produced by the lash of a whip, produces an explosion. The impression conveyed to the ear, depends entirely on the nature and motion of the sounding body; hence, as there is an endless variety in bodies, and also in the vibrations communicated by the same body; there is also an endless variety of sounds, both in *duration*, in *loudness*, and in *quality*. The nerves of the ear, by a delicacy of mechanism of which we have no conception, appear capable of analyzing every pulsation of the air, and of determining immediately the law of motion of the particles in contact with the ear. Hence, all the qualities we distinguish in sounds, grave or acute, smooth, harsh, mellow, and all the nameless and fleeting peculiarities which constitute the differences between the tones of different musical instruments, as bells, flutes, strings, &c. and between the voices of different individuals and different animals.

II. CONTINUITY OF SOUND. The ear retains for a moment of time after the impulse has ceased, a perception of the sound, as the eye retains a perception of light; consequently, if the vibrations be repeated beyond a certain degree of quickness, the ear loses the intervals of silence, and the sound appears continuous. The frequency of repetition necessary for the production of a continued sound, is probably not less

than sixteen times in a second, though the limit appears to differ in different persons. (See Ear.)

III. Noise or unmusical sounds. Every irregular motion communicated to the air, produces what we call a *noise*, in contradistinction to a musical sound. If the impulse is short and single, we hear a crack or explosion; yet it is worthy of remark, as a proof of the extreme sensibility of the ear, that the most short and sudden noise has its peculiar character; the crack of a whip, the blow of a hammer on a stone, and the report of a pistol, are perfectly distinguishable from each other. If the impulse is of perceptible duration and very irregular, we hear a crash; if long and interrupted, a rattle or a rumble, according as the vibrations are more or less continuous; and so for other varieties of noise.

IV. Musical sounds. If a sucession of impulses occurs at exactly equal intervals of time, and if all the impulses are exactly similar in duration and intensity, the sound produced is perfectly uniform and sustained, and has that peculiar and pleasing character to which we apply the term *musical*. In musical sounds, there are three principal points of distinction, the *quality*, the *intensity*, and the *pitch*. The ordinary ways by which musical sounds are excited and maintained, consist in setting elastic bodies into a vibratory motion; whether flexible, as stretched strings or membranes, or rigid, as steel springs, bells, and glasses, or columns of air of determinate length enclosed in pipes. All such vibrations consist in a regular alternate motion to and fro of the particles of the vibrating body, and are performed in strictly equal portions of time.

1 *Quality of sounds.* This depends, so far as we know, on the nature and structure of the vibrating bodies. A slender body produces a more thrill-

ing sound, than a large one of the same pitch, as the slender pipes of an organ. The different degree of elasticity, and the greater or less abrubtness of the impulse, and the various obstructions tend to produce different qualities of sound.

2 *Intensity of sounds.* The loudness and softness of a sound depends entirely on the violence of the impulse. If the vibrating body is violently agitated, it will produce a greater agitation of the air, that is, each particle will move farther forwards from its natural position and backwards, but the time of its motion to and fro will, in each case, be equal; like the motion of a pendulum, the farther it moves, the more velocity and force it has, but the time of its vibration remains uniform. This may be illustrated by a stretched musical string: if it is forced far out of its natural position, it will produce a loud sound, which gradually diminishes until it entirely ceases. At first, the vibrations are greater and have more velocity, but the time of each vibration remains the same, as we learn from the uniformity of the pitch. (See STRINGS.)

3 *Pitch of sounds.* This is determined solely by the frequency of the vibrations; so that all sounds, whatever may be their loudness or quality, in which the impulses occur with the same frequency, are at once pronounced by the ear to have the same pitch, or are in unison. It is the pitch only of musical sounds whose theory is susceptible of exact reasoning; and on this the whole doctrine of harmony depends. (See PIPES, STRINGS, SOLIDS, EAR, and also V below.)

V. PROPAGATION OF SOUND. Sounds are communicated to the ear by some medium as the air; which *carries* the vibrations from any sounding body to the ear, and produces the perception of a sound. The air itself does not pass from the vibra-

ting body to the ear. The surface of the body puts into motion the particles of air which are in contact with it, and these in turn put into motion the next adjoining particles, and so on successively, until the particles in contact with the ear are in a similar manner affected. Let S, represent any sounding body and E, the ear, and a, b, c, &c. successive particles of air at rest. S $\overset{a\ b\ c\ d\ e\ f}{\cdot\ \cdot\ \cdot\ \cdot\ \cdot\ \cdot}$ E. If the sounding body, S. is put into motion, it will communicate its motion to the particle of air *a*, and that to *b*, and *b* to *c*, and so on to *f*, which communicates the sound to the ear. Each particle of air, after it has moved on a certain distance and communicated its motion to the next particle, returns to its original position; and if the body continues to vibrate, is again sent forward and returns in the same manner; thus producing one continuous sound. This may be illustrated by a series of elastic balls suspended in a line, at small equal distances from each other. If the first ball *a*, is put into motion by the force S, in the direction E, it will communicate its motion to the next ball *b*, and that to the next ball *c*, and so on successively to the end: each ball, after it has communicated its motion to the next, falls back to its own place, and remains at rest, unless the disturbing force continues to act; in which case, it will again move forward, and communicate its motion as before. There is some resistance in communicating the motion from ball to ball, so that the ball *f* will not move with so much force as the ball *a*; and if the series is continued to a great distance, the force will be expended before it arrives at the end of the series. The same is true with regard to the air. Consequently the sound near the sounding body is much louder than at a distance, and gradually diminishes until it is entirely lost.

VI. Velocity of sound. Each particle of the air brought under the influence of the sounding body, moves from its place a certain distance according to the intensity of the sound, puts the next particle of air into a similar motion, and returns to its own place. (See V above.) The air being inert, the motion cannot be communicated from particle to particle instantaneously, but some little time must be occupied. Thus time must elapse according to the distance, before any sound can reach the ear. This we all know from experience. It is also a well established fact, that all sounds, whether high or low, loud or soft, move with the same velocity. The cause of this is, that it always occupies the same length of time for one particle to act on another, or to communicate its motion. This is a principle arising out of the law of the inertness of all bodies. The average actual velocity of sound, deduced from experiment and observation, is found to be about 1100 feet in a second, or a mile in a little less than 5 seconds. The pitch of sounds in pipes, (see Pipes,) depends entirely on this principle. By this law, we determine the time it will take for the vibrations to traverse the length of the tubes, and how many times it will pass in a second. We know also the number of vibrations in a second for a given sound; and hence can adjust the one to the other. Thus, for middle C, the vibrations must be about 550 in a second; 1100 divided by this, will give 2 feet for the length of the pipe.

VII. Relations of musical sounds. 1 *Unison.* Two sounds whose vibrations are performed with equal rapidity, whatever may be their difference in loudness or quality, affect the ear with an impression of accordance which we term a *unison;* which irresistibly impresses on us the idea of a perfect simi-

larity between them, that we express by saying that their pitch is the same,or that they sound the same note: the ear will therefore judge of them as of a single sound having a quality intermediate between the two, and an increased loudness.

2 *Concord* and *Discord.* When two notes not in unison are sounded at once, the ear distinctly perceives both, and can separate them in idea, and attend to one without the other. But besides this, it receives an impression from them jointly, which it does not acquire when sounded singly even in close succession, either of consonance or dissonance, as the case may be. The ear is thus irresistibly led to regard some combinations as peculiarly agreeable and satisfactory, and others as harsh and disagreeable. Now it is invariably found, that the former are those and those only in which the vibrations of the individual notes are in some simple numerical ratio to each other, as 1 to 2, 1 to 3, 1 to 4, 2 to 3, &c.; and that the concord is more satisfactory and pleasing, the lower the terms of the ratio are, and the less they differ from each other: while, on the other hand, such notes as are vibrated in times bearing no simple numerical ratio to each other, or in which the times of the ratio are considerable, as for example, 8 to 15, when heard together, produce a sense of discord, and are extremely unpleasant. This simple remark is the foundation of all harmony.

3 *The Octave.* Next to a unison, in which the vibrations of the two notes are in a ratio of 1 to 1, the most satisfactory concord is the *octave*; where the vibrations are as 1 to 2, or one note has two vibrations to each single one of the other. The octave approaches in its character to a unison; and indeed two notes so related, when played together, can hardly be separated in idea; and when played singly, ap-

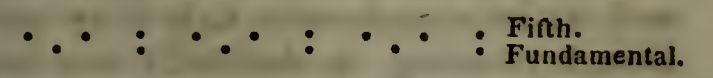
pear rather as the same note differently modified, than as independent sounds; for instance, when a man and woman sound together. The reason of this will be evident on inspecting the following figure, where the dots of the upper line represent the vibrations of the acuter note; while those in the lower represent the vibrations of the graver note.

As the ear receives these all in the order they are placed, it will be the same thing as if they were produced by two sounds both of the graver pitch, but one of a different intensity and quality from the other; the one having its impulses (represented by :) the sum of two separate impulses of the octave sounds, the other (represented by .) consisting of the alternate impulses of the acuter only. The *fifteenth* or *double octave*, which consists of notes whose vibrations are as 1 to 4, is a very agreeable and perfect concord; as are indeed all the octaves, 1 to 8, 1 to 16, &c. which partake of the peculiar character of the octave, an impression of perfect agreement and identity.

4 *The Fifth.* The next in order is the combination 1 to 3, where the vibrations of the graver note are trisected by those of the acuter, which gives a concord called the *twelfth*, a very agreeable one. In the above, if we substitute for the note 1 its octave 2, we shall have the concord whose vibrations are in the ratio of 2 to 3, or as we shall call it for brevity, the concord 2 to 3, whose pulsations are thus represented.

For the sake of comparison with the fundamental note, and to bring all the intervals into the same octave, and thus get the simple intervals above the fundamental note, in this case the fifth, we shall suppose the number of vibrations

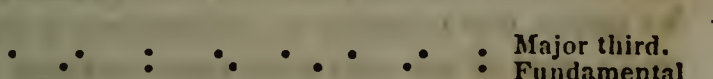
diminished, still preserving the ratio, so as to have the lower row consist of the vibrations of the fundamental note.



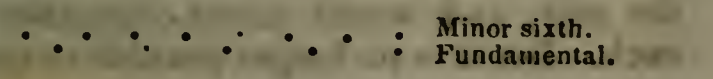
This concord is termed the *fifth*, and is a remarkably agreeable one, even more so than the twelfth, which from the greater interval between its component notes, allows them to be more readily distinguished, while the notes of the fifth blend much more perfectly.

5 *The Fourth.* If instead of substituting for 1 its octave 2, we substitute its double octave 4, we get the concord 4 to 3 or the *fourth*, which may be regarded as the complement of the fifth. Illustration with reduced vibrations, taking the fundamental for the lower note :

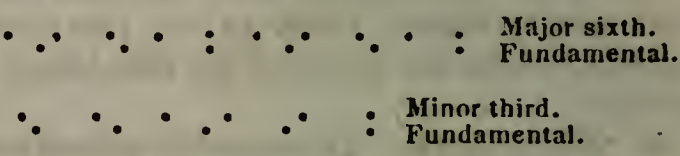
6 *The Major Third.* The concords 1 to 5, 2 to 5, and 4 to 5, especially the latter in which the tones approach pretty near to each other, are all remarkably agreeable. The last is called the *major third ;* and the two former, the *seventeenth* and the *tenth*, or the double octave and the octave of the third, are regarded rather as varieties of it than as independent concords. Illustration :



7 *The Minor Sixth.* The concord 8 to 5, which is the complement of the major third, is called the *minor sixth ;* and is almost equally agreeable with the major third to which it is related. Illustration :



8 *The Major Sixth*, and *the Minor Third.* The concord 3 to 5, is called the *major sixth*, which as well as its complement 6 to 5 or the *minor third*, though pleasing, is decidedly less satisfactory than the foregoing; and as we cast our eye on the illustrations, the period of recurrence of their combined pulses in the same order, is longer and more complex.



9 *Discords* and *their Resolution.* Higher prime numbers than 5 enter into no concordant ratios. Such combinations as 1 to 7, 5 to 7 or 6 to 7, are altogether discordant. The ear will not endure them, and cannot rest on them. When sounded, a craving for a change is produced, and this is not satisfied but by changing one or both the notes, so as to fall as easily as the case will permit, into some of the concords above enumerated: this is called the *resolution* of a discord. Such is the constitution of our minds in this respect, that a concord agreeable in itself is rendered doubly so by being thus approached through a discord. (See Discord.)

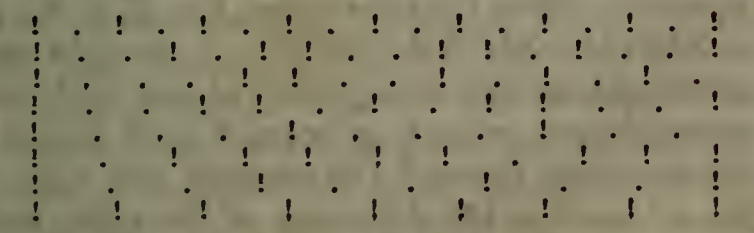
10 *The Second* and *the Seventh.* If we take any note for a fundamental sound, and tune a string so as to vibrate to correspond to that note, and represent by unity the number of vibrations it makes in a second; and if we also tune other strings so as to make at the same time respectively the number of vibrations represented by $\frac{5}{4}, \frac{4}{3}, \frac{3}{2}, \frac{5}{3}, 2$; and then sound all these strings in succession, beginning with the fundamental note; we shall perceive that two of the sequences, the first and the last, are much wider than the rest, and would admit of another note between each. But it is no longer possible to choose for these

notes, such as will make concordant intervals with the fundamental note. But in order to obtain as many concords as possible in the scale, so as to produce the most harmonious music, they are made to harmonize with that note which bears the nearest relation to the fundamental one, that is the *fifth*. The vibrations of a note a fifth higher than the fifth, are represented by $\frac{3}{2}\times\frac{3}{2}$, or $\frac{9}{4}$; and as this is greater than two, it lies beyond the octave. We must therefore tune it an octave lower, or to the vibration $\frac{9}{8}$, and thus we get the *second*. Again, the vibrations of a note a major third higher than the fifth, will be represented by $\frac{3}{2}\times\frac{5}{4}$ or $\frac{15}{8}$; and the major third is the next most harmonious interval in the scale. Tune a string to the vibration $\frac{15}{8}$, and thus we get the *seventh*, which completes the scale.

11 The scale found above, called the *diatonic scale*, with the vibrations of its respective notes will stand thus:

Signs,	1	2	3	4	5	6	7	8
Names of Intervals	1st	2d	3d	4th	5th	6th	7th	8th
Ratios of Vibrations	1	$\frac{9}{8}$	$\frac{5}{4}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{5}{3}$	$\frac{15}{8}$	2
Multiplying by 24 to avoid fractions.	24	27	30	32	36	40	45	48
Differences		3	3	2	4	4	5	3

Illustrated by a figure.



The dashes show when the vibrations of particular notes coincide.

By doubling the number of these vibrations, we get the octaves above; and by halving the number, we get the octaves below. Illustrated by ratios;

Signs,	1	2	3	4	5	6	7	8
Octave above,	2	9/4	5/2	8/3	3/1	10/3	15/4	4
Octave below,	1/2	9/16	5/8	2/3	3/4	5/6	15/16	1

By again doubling and halving, we get the double octaves above and below; and so on. (See SCALE.)

A proper *combination* of the above sounds constitutes the chords or harmony of music. (See HARMONY, BASE, and CHORDS.)

SOUND BOARD, the wind chest of an organ. *(little used.)*

SOUND BOARD, } that part of stringed in-
SOUNDING BOARD, } struments, such as a violin, piano forte, &c., which is placed immediately under the strings, and which serves to augment the sound. The vibrations are communicated to it from the strings by means of the bridge or support. It is made of light well seasoned pine, which should be clear, porous, elastic, and brittle.

SOUNDING POST, a small post placed perpendicularly in the body of a violin and violoncello nearly under the bridge, which serves both as a support, and to propagate the vibrations to the back of the instrument.

SPACES, the intervals between the lines of the staff, named 1st, 2d, 3d, and 4th, from the bottom upward. (See CHARACTERS, Ex. 3, p. 67.)

SPEAKING TRUMPET, a straight conical tube made of tin, with a large bell at one end, and a mouth piece large enough to receive both lips at the other. By speaking through the trumpet, the vibrations of the air all tend in the direction of the tube, and thus the elasticity and force are increased, and the sound propagated much farther in that direction, so as to be distinctly heard at the distance of a mile; hence, it is very useful at sea. The invention of the speaking trum-

pet is modern; unless we regard as one, the *Stentorophonic tube*, or horn with which Alexander the Great is said to have given orders to his army, at the distance of one hundred stadia or twelve miles.

SPECIES, in ancient music, a subdivision of one of the *genera*.

SPICCATO, (Ital. *spiccare* to loosen.) detached. (See STACCATO.)

SPINET, (Lat. *spinæ*, thorns, from the resemblance of its quills,) an instrument like a harpsichord, but less powerful and variegated.

SPINETTA, (Ital.) a spinet.

SPIRITOSO, } (Ital.) with spirit and anima-
CON SPIRITO, } tion.

STACCATO, (Ital.) separated; used in contradistinction to *legato*, implying that the notes are to be struck in a distinct, short, and pointed manner. There are several degrees of staccato. The first is expressed by a dash, Ex. 45, p. 71, and is applied to forcible passages: the notes should be forcibly struck, and suddenly dropped, thus making a rest between them. This is done on keyed instruments, by dropping the key before the length of the note is terminated; and on the violin, by a distinct bow for each note. The next degree, also termed *marcato*, is expressed by dots over the notes, Ex. 45, p. 71; and implies that the notes should be struck short, but not so forcibly, and *spotted* in a more light and tender manner, aiming at neatness rather than brevity. For stringed instruments, the spotted notes are slurred, and the effect is produced by letting the bow rebound from note to note, including many in the same bow. This species of execution, when applied to the voice in quick and lofty passages, produces a brilliant effect. To achieve this, the upper part of the throat is contracted as in uttering *ea* in *earth*, striking every note

separately, with a delicate distinctness, and in the same breath. There is another degree called the *dead accent*, produced on the violin, by attacking the note boldly, and pressing the bow with a dead weight on the string, which instantly stops the vibration; this is sometimes written with spotted notes and rests. For stringed instruments, the pizzicato forms the best staccato for pianissimo passages.

STAFF, the five lines which support the notes; (see CHARACTERS 52, Ex. 1.) Music for the piano forte and organ is written on two staffs; the upper for the melody or right hand, and the lower for the base or left hand.

STANZA, (Ital.) a set of lines adjusted to each other; a verse of a hymn.

STEM OF A NOTE. (See CHARACTERS 53, Ex. 13.)

STENTATO, (Ital.) a term applied to a loud and forced manner of singing, in which the voice is thrown out with explosive violence.

STENTOROPHONIC TUBE OR HORN, a speaking trumpet, (which see;) so named from Stentor, a crier in Homer's Iliad, who could call louder than fifty men.

STESSO, (Ital.) the same; as, *il tempo stesso*, the same time.

STICCADO, an instrument consisting of slips of wood, metal, or glass of different lengths, and tuned to the notes of the scale, and resting on the edges of a kind of open box: which are struck with a ball attached to a piece of whalebone. (See HARMONICA.) The name *sticcado* was given to it, because the slips were originally made of wood.

STILO, (Ital.) style; as, *stilo dramatico*, a style suited to express the passions.

STOP, a word used to denote that pressure on the

strings of a violin and violoncello, by which they are brought into contact with the finger board, in order to produce the given note.

DOUBLE STOP, on a violin, takes place, when notes are sounded on two strings at once; this is difficult to accomplish, but when well executed produces a fine effect.

ORGAN STOP, a collection of pipes similar in tone and quality, which run through the whole or a great part of the instrument. (See ORGAN.)

STOPPED, an epithet applied to a *string* when pressed by the finger, in distinction from an *open* string; also applied to an *organ pipe* when closed by a plug.

STRAIN, each of the successive divisions of a piece of music, which are separated from each other by double bars. The several strains are called first, second, third, &c.

STRASCINO, (Ital. a drag.) (See ORNAMENTS.)

STRATHSPEY, a Scotch dance of a lively character.

STREPITOSO, (Ital,) noisy; in an impetuous, loud, and boisterous manner.

STRETTO, (Ital.) compressed, shortened; a term placed near the conclusion of a piece of music, to denote an accelerated movement to produce effect: applied to a *fugue*, it denotes that the subject and its answer are compressed; this generally takes place near the end, and resembles the recapitulation of a discourse.

STRIDULOUS, an epithet applied to a voice or instrument violently out of tune, and unmelodious in the quality of its tones.

STRING, a wire or preparation of sheep or cat-gut, used for musical instruments. The ancients originally strung their instruments with thongs of

leather, but afterwards used strings of metal, even of gold and silver.

STRINGS. THEORY OF THEIR VIBRATIONS.

I. If a string or wire is stretched between two fixed pins or supports, and then struck or drawn a little out of a straight line, and suddenly let go, its tension will bring it back to a straight line, and its velocity will carry it still farther to the opposite side, and thus it will vibrate to and fro until its own rigidity, and the resistance of the air, reduce it to rest; but if a bow is drawn across it, the vibrations may be continually renewed, and maintained for any length of time; and a musical sound is heard, corresponding to the rapidity of the vibrations.

II. TIME OF THE VIBRATION. The same string, while the circumstances remain the same, will make all its vibrations whether great or small in the same time. When the vibrations are large, or the string passes a considerable distance on each side of its natural position, the velocity is greater just in the same proportion; so that the increased distance and the increased velocity compensate each other, and consequently the vibrations are all equal in time, and produce one uniform sound in pitch, the only difference is in its intensity. (See SOUND IV, 2.) The circumstances which modify the times of the vibrations of a string, are its *length*, its *tension*, and its *weight*.

1 *The* LENGTH. The tension and weight remaining the same, the number of vibrations of a string varies inversely as its length; that is, the longer the string, the slower or greater time the vibrations. Thus, if a given string produce a vibration in a given time, a string half as long will produce two vibrations in the same time; one a third as long, three vibrations; one two thirds as long, three vibrations to two of the former; and so on. (See SOUND IV, 3.)

2 *The* TENSION. The length and weight remaining the same, the number of vibrations of a string varies as the square root of the tension; that is, the greater the tension the quicker the vibrations, but not in a ratio equal to the force of tension, only its square root. Thus, if a string stretched by a given weight, produces a vibration in a given time; a similar string, stretched by four times the weight, will produce two vibrations in the same time, (two being the square root of four.) If the weights are as 4 to 9, the vibrations will be as 2 to 3, which is the interval of a fifth; (see INTERVALS.) Hence, to raise a string an octave, we must apply four times the weight to extend it.

3 *The* WEIGHT. The length and tension remaining the same, the number of vibrations varies inversely as the weight; that is, the heavier the string, the slower the vibrations. Hence, increasing the weight has the same influence as increasing the length. The weight of a string may be increased by increasing the size, or by winding it with small metallic wire, like the heavy strings of a violin, violoncello, &c.

The following formulas express the pitch of a string, when neither of the above conditions is limited, and also when one or two conditions are given.

Unlimited; $\frac{T^{\frac{1}{2}}}{L \times W}$. Length given; $\frac{T^{\frac{1}{2}}}{W.}$ Tension given; $\frac{1}{L \times W}$.

Weight given; $\frac{T^{\frac{1}{2}}}{L.}$ L & T given; $\frac{1}{W.}$ L & W given; $T^{\frac{1}{2}}$. T & W given; $\frac{1}{L.}$

L stands for length; T for force of tension; and W for weight.

Thus we can raise the pitch of the sound, by increasing the tension, or by diminishing the weight or the length; and *vice versa*.

III. ADAPTING STRINGS TO SOUNDS. For high sounds, the strings must be small, short, and tight;

and for low sounds, they must be heavy, long, and lax. In a piano forte or harp, all these circumstances occur; but in a violin, &c., we can only vary the weight or size, and the tension. Strings should be adapted to the place they are to occupy, so as not to be too tight or too lax.

IV. Harmonic sounds. 1 *By the touch.* If a string in the act of vibration is gently touched by the finger or a feather, (1) exactly in the middle, it will not cease to vibrate, but will divide itself into two parts, and each part will vibrate twice as fast as the whole string or in octaves to the fundamental note, that is, the note given by the whole string. (2) If the finger is placed at one third of the distance from end to end, the string will divide itself into three equal parts, and each part will vibrate three times as fast as the whole string; or the twelfth or octave of the fifth to the fundamental note. The points where the string remains at rest, are called nodes or nodal points. (3) If the finger is placed at one fourth of the distance, we shall have the fifteenth or double octave. (4) If at one fifth, the seventeenth or double octave of the third. (5) If at one sixth, the nineteenth or double octave of the fifth. (6) If at one seventh, the flat twenty-first or the double octave of the flat seventh. (7) If at one eighth, the triple octave.

2 *By the bow.* If the bow is applied to the string of a violin or violoncello near the bridge, so gently as not to be able to put the whole string into motion, the string will divide itself into a certain number of equal parts, according to the impulse given by the bow; and the harmonic sounds will be heard as above.

3 *By a gentle current of air.* A lax string will divide by the gentle action of the air, in the same manner. This is the principle of the Eolian harp;

in which two or more harmonic sounds frequently take place in the same string at the same time.

4 *By sympathy.* (1) If two strings near each other are in unison, and one of them is forcibly made to vibrate, the other will be put into motion by sympathy. (2) If a string an octave above another, is made to vibrate in the same manner, the lower string will immediately divide itself into two parts, and each part vibrate in unison. The node may be seen by the eye or by placing a strip of paper on the center. (3) In the same manner, the twelfth, fifteenth, &c. may cause the fundamental to divide and sympathize with them. (5) Other objects besides musical strings, may be made to vibrate by sympathy. Some years since, the writer when in college was accustomed to play the violoncello. Whenever low F was struck on the instrument, something about the window would immediately sound nearly as loud as the instrument, which answered the purpose of a tuning fork. Such jarring sounds are frequently heard, while performing on the piano forte, which most persons suppose is some defect of the instrument.

V. Divisions of a string. The divisions of a string to produce any given sound, are all strictly mathematical, as pointed out in Monochord. The stops on viols are made on this principle, according to the table under Monochord. Whatever is the length of the string, a stop at one third will produce a fifth; at one fourth, a fourth; at one ninth or one tenth, a tone; at one sixth, a minor third, or a tone and a semitone; at one fifth, a major third, or two tones, &c. (See Monochord.)

STRINGED INSTRUMENTS are of various sorts: *first*, those played by means of keys, as the Piano forte and Harpsichord; *second*, such as are struck by the fingers, as the Harp, and stopped by

the fingers, as the Guitar; and *third*, played with a bow, as the various kinds of Viols. (See these articles, and STRINGS above.)

STRINGENDO, (Ital. *stringere*, to press,) same as Stretto. In violin music, the word implies that the finger is to slide along the string from one note to another.

STROMENTI, } (Ital. plu.) with instru-
CON STROMENTI, } ments.

STROMENTI DI VENTO, (Ital.) wind instruments.

STROMENTO, (Ital.) an instrument.

STUDIO, (Ital. a study,) an exercise for a particular instrument; as, *studios* for the piano forte.

STYLE is a word which has multifarious applications. *First*, it is used to express the manner in which a piece of music is to be performed, or the manner of the performance itself; as the *staccato*, *legato*, *andante*, &c. *Second*, the peculiar character which distinguishes a piece from others; this character varies with the country, the age, the taste of the people, the genius of the author, and the design of the piece. The style of *church* music differs from the *theatrical* and *secular;* a *symphony* differs from a *sonata* or *concerto;* and the *cantabile* and *adagio* differ from the *allegro* and *presto*. We speak also of the style of *Handel*, of *Beethoven*, &c. The nature of musical composition is undergoing a continual change; and so unlimited are its combinations and powers, that its style is without limits. Every age has its favorite authors, and its favorite style: and when a genius strikes out a new path, his compositions being out of the favorite track, are often received with utter dislike. When Haydn's music was first received in England, it was compared, by an elegant writer and composer, to the ravings of a Bed-

lamite. But now, the style of this great revolutionist is so universally adopted and imitated, that the works of most preceding authors are almost entirely forgotten. The acquirement of a good style depends much on natural taste, aided by judgment and experience.

SUAVE, (Ital.) sweet, soft.

SUB, (Lat.) under, lower; a word much used in connexion with, and in the composition of other words; corresponding to the Greek *hypo*, Ital. *sotto*, Fr. *dessous*, and English, *below*.

SUB BASE, the deepest pedal stop or the lowest notes of an organ.

SUBDOMINANT, the note below the dominant. (See Scale, II.)

SUBITO, (Ital.) quickly; as, *volti subito*, turn over quickly.

SUBJECT, the principal melody or theme of a movement; the idea which serves as a foundation for the other parts.

SUBMEDIANT, the *middle* note between the tonic and subdominant *below*. (See Scale.)

SUBSEMITONE, } the semitone or note next
SUBTONIC, } *below* the tonic; the leading note of the scale.

SUCCESSION, a term applied to the successive notes of a melody, in distinction from the successive chords of a harmony, which is called *progression*. The succession is *regular* or *conjoint*, when the notes succeed each other regularly or without skips; and *irregular* or *disjoint*, when they proceed by skips.

SUITE, (Fr.) the name formerly given to a set or course of lessons or to a series of movements in a single piece, afterwards denominated *sonata*. (which see.)

SUO, (Ital.) own, his, her, its, their; as, *suo loco*, in its own place.

SUONO, (Ital.) sound.

SUPER, (Lat.) above, upper; the opposite of *sub.*

SUPERFLUOUS, an epithet applied to an interval containing a semitone more than the same when major or perfect.

SUPERTONIC, the note next *above* the tonic. (See SCALE.)

SUPPOSED BASE, a derived or figured base, in distinction from *fundamental* base.

SUPPOSITION, a term applied to chords of the seventh, when a third, fifth, or seventh is added below: when a third is added, the chord is termed a ninth; when a fifth is added, it is termed an eleventh; and when a seventh is added, a thirteenth. This term was used by Rameau to denote these several chords which we now, in a much more simple and satisfactory manner, explain as suspensions.

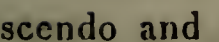
SUSPENSION, (see CHORDS 39, and Ex. 13, p. 81.) Suspensions may also take place in melody, when the last note of one harmonic figure suspends the first note of the next. (See *Figurative* HARMONY.)

SUSTAINED, an epithet applied to notes when they are continued full, through their whole length. (See SOSTENUTO.)

SVEGLIATO, (Ital.) brisk, lively.

SWAN'S AIR, a *requiem*, or melody supposed by the ancients to be sung by swans at their death.

SWELL, *strictly*, a gradual augmentation of the sound, the same as *crescendo:* but as we need a concise term to express the gradual augmentation and diminution of a sound, and the word properly means a protuberance or enlargement in the middle, as a swelling wave, a swelling; *swell* has been adopted for this purpose; and present usage appears to justify giving as a proper definition of the word,

SWELL, crescendo and diminuendo united in one sound; thus,  (See DYNAMICS.)

SWELL OF AN ORGAN. (See ORGAN.)

SYLLABICATION, applying syllables instead of words, to musical notes for the practice of solmization.

SYMPATHY OF SOUNDS, an expression denoting such soft harmonic sounds as accompany every loud sound, and are distinguished by a delicate ear; consisting of the twelfth or double fifth and the seventeenth or triple third of the principal sound. (See HARMONIC SOUNDS.)

SYMPHONIOUS, a harmonious combination of voices or instruments; a 'concord of sweet sounds.'

SYMPHONIST, a composer of symphonies or instrumental music.

SYMPHONY, (Gr. *sun*, together, and *phonee*, a sound,) the instrumental passages of a vocal composition, which precede and follow the voice at the beginning and end of the piece or of the several movements. In a more general sense, a composition for the instruments of a full band or orchestra, consisting of several movements, generally a slow introduction, a spirited movement in two parts, a minuet and trio, and finally a quick movement. The composition of symphonies has called forth the talents of the most eminent modern composers, Haydn, Mozart, and Beethoven.

SYNCOPATION. (See ACCIDENTAL NOTES III.)

SYSTEM, a term applied to a series of sounds, arranged in a particular order: as, the Greek system made up of tetrachords, Guido's system, &c. The modern system includes about eight octaves. The word system is sometimes applied to a method of calculation by which the ratios of the intervals and sounds are determined, as the system of Pythagoras, &c.: also applied to a particular doctrine, as the system of Rameau, &c.

T.

T. An abbreviation of *Tutti;* sometimes when written over the base staff, it denotes the *tenor* with the base clef.

TABLATURE, the mode of writing music by letters or cyphers instead of notes. *Tablature* is also used to express the manner of writing music for the lute, base viol, &c., by drawing parallel lines to represent the strings of the instrument, and placing in the spaces the letters to be used, which refer to the frets.

TABOR, a small drum, generally used to accompany the pipe in dances. They are both played by the same performer; the notes of the pipe being regulated by the left hand, and the tabor being played by the right. The *tabor and pipe* have long been favorite instruments with the common people of most countries in Europe, being particularly calculated for dancing parties.

TABRET, a kind of drum used by the ancient Hebrews.

TACET, } (Lat.) be silent; generally used in
TACE, } instrumental accompaniments, to denote that the part is to be silent; as, *violino tacet*, the violin is not to play.

TAIL, the stem of a note. (See STEM.)

TAIL PIECE, the piece of ebony below the bridge, to which the strings of a violin, &c., are attached.

TAMBOUR, } (Fr.) a drum shaped like a
TAMBOURINE, } sieve, furnished at the rim with small bells or jingles. It is shaken by one hand,

while the other beats the parchment drawn over one end; and is used to mark the time in dances, and in military bands.

TAMTAM. (See GONG.)

TANTO, (Ital. too much,) a term used to qualify the word to which it is annexed; as, *allegro non tanto*, allegro but not too quick.

TARDANDO, (Ital.) retarding. (See LENTANDO.)

TARDO, (Ital.) slow. (See LARGO.)

TASTE, that refinement of mind and feeling by which a composer or performer is qualified to infuse grace and elegance into his productions and performances. Taste is acquired by hearing good performers, and practising and examining classical compositions.

TASTO, (Ital.) the touch of any instrument; also, without chords, same as,

TASTO SOLO, (Ital.) written over or under a base, denotes that no harmony is to be introduced with the right hand; but the simple notes of the base are to be struck with the left hand, while the right either remains at rest or performs in octaves.

TATOO, the beat of a drum at night, by which the soldiers are called to their quarters.

TAUTOLOGY, a tireful repetition of the same musical sounds or phrases.

TAWDRY, a term applied to all unnecessary ornaments, vocal or instrumental.

TEAKETTLE SHAKE, a term of derision applied to a repetition of the same note, in lieu of a shake neatly formed of two notes.

TEDESCA, German.

ALLA TEDESCA, in the German style.

TE DEUM, (Lat.) a Latin thanksgiving hymn of the church, so called from the first words: also named,

TE DEUM LAUDAMUS, (Lat.) we praise thee O God; a celebrated service composed by St. Ambrose, in the fourth century.

TELL TALE, a movable piece of ivory or lead suspended in the front of an organ, which serves to apprise the performer in what degree the wind is exhausted.

TEMA, (Ital.) a theme.

TEMPERAMENT, the accommodation or adjustment of the imperfect sounds, by transferring a part of their defects to the more perfect ones; in order to remedy in some degree the false intervals of those instruments whose sounds are fixed. To show the nature of temperament, we must examine the relations of the several notes of the scale. In Sound VII, 11, we found the ratios of the vibrations of the several notes, taking the fundamental sound to be 1, as follows: (1) 1, (2) $\frac{9}{8}$, (3) $\frac{5}{4}$, (4) $\frac{4}{3}$, (5) $\frac{3}{2}$, (6) $\frac{5}{3}$, (7) $\frac{15}{8}$, (8) 2; the successive differences of which, multiplied by 24 to avoid fractions, gave 3, 3, 2, 4, 4, 5, 3; which are not equal, nor in regular order. In obtaining the ratios, we compared each note with the fundamental taken as one; but if we compare each note with the next preceding, we shall get for the ratio of 1 to 2, $[1 : \frac{9}{8}]$ $\frac{9}{8}$; 2 to 3, $[\frac{9}{8} : \frac{5}{4}]$ $\frac{10}{9}$; 3 to 4, $[\frac{5}{4} : \frac{4}{3}]$ $\frac{16}{15}$; 4 to 5, $\frac{9}{8}$; 5 to 6, $\frac{10}{9}$; 6 to 7, $\frac{9}{8}$; 7 to 8, $\frac{16}{15}$. It will be observed, that the diatonic scale so constructed consists of three different sorts of intervals, between the successive notes: thus, the intervals from 1 to 2, 4 to 5, and 6 to 7, are each expressed by the ratio $\frac{9}{8}$, and are called *major tones*, [T.]; those from 2 to 3, 5 to 6, are each $\frac{10}{9}$, little less than the preceding, and called *minor tones*, [t.]; and those from 3 to 4, and 7 to 8, are each $\frac{16}{15}$, much less than either of the preceding, and called *diatonic semitones*, [S.] These three ratios, $\frac{9}{8}$, $\frac{10}{9}$, and $\frac{16}{15}$, are nearly in

the proportion of the whole numbers, 9, 8, and 5, which for simplicity we shall take as the representatives of T. t. and S. The scale then, thus formed, will consist of Ex. 1 :

Ex. 1	Scale,	1	T.	2	t.	3	S.	4	T.	5	t.	6	T.	7	S.	8
	Proportional parts,		9		8		5		9		8		9		5	

that is, three major tones, two minor tones, and two diatonic semitones. Hence the following numbers will stand for the several intervals ;

Ex. 2	Intervals,	2d	3d	4th	5th	6th	7th	8th
	Parts,	9	17	22	31	39	48	53

If we take this as the natural scale of C, and transpose the scale to the key of D, for instance, by sharping F and C, so as to make from F♯ to G and from C♯ to D diatonic semitones or 5, we shall find that the major and minor tones will not occur in the proper order.

Ex. 3 $D\,{}^{t}_{8}\,E\,{}^{T}_{9}\,F\sharp\,{}^{S}_{5}\,G\,{}^{t}_{8}\,A\,{}^{T}_{9}\,B\,{}^{T}_{9}\,C\sharp\,{}^{S}_{5}\,D$

The minor tones ought to be between E and F♯, and A and B. Again, if we transpose the scale to the key of B flat, by flatting B and E, so as to make the intervals between D and Eb and A and Bb diatonic semitones, a similar defect will occur.

Ex. 4 $Bb\,{}^{T}_{9}\,C\,{}^{T}_{9}\,D\,{}^{S}_{5}\,Eb\,{}^{t}_{8}\,F\,{}^{T}_{9}\,G\,{}^{t}_{8}\,A\,{}^{S}_{5}\,Bb$

The difference between a major and a minor tone, which in ratios as $\frac{9}{8}$ divided by $\frac{10}{9}$, equaling $\frac{81}{80}$, or 1 in the proportionate values we have taken, is called a *comma.* We thus see, that if the C scale is made perfect, some of the intervals in the transposed scales will be a comma too flat or too sharp.

Thus far we have considered only the diatonic

scales. But there is another and still greater difficulty in the chromatic scale; as a diatonic semitone is more than half a tone major or minor. If we take the chromatic scale of 12 semitones, by placing a semitone in each of tones major and minor, we shall find it will make a material difference, whether we do it by flats or sharps; and in either case the semitones will be very unequal.

Ex. 5 By sharps, C 4 C♯ 5 D 3 D♯ 5 E 5 F 4
By flats, C 5 D♭ 4 D 5 E♭ 3 E 5 F 5
F♯ 5 G 3 G♯ 5 A 4 A♯ 5 B 5 C
G♭ 4 G 5 A♭ 3 A 5 B♭ 4 B 5 C

The chromatic semitones thus left after the diatonic are taken away, are each less than half a tone; and unequal among themselves, some being four parts and others three. Writing the different intervals above, one after the other, we have Ex. 6:

Ex. 6 C $\overset{s}{}_{4}$ C♯ $\overset{d}{}_{1}$ D♭ $\overset{s}{}_{4}$ D $\overset{s}{}_{3}$ D♯ $\overset{d}{}_{2}$ E♭ $\overset{s}{}_{3}$ E $\overset{s}{}_{5}$ F &c.

Small s stands for the larger chromatic semitone; italic *s* for the smaller; and d for the dieses or quarter tone.

Thus, C♯ and D♭ differ 1 part, and D♯ and E♭ differ 2 parts. Such an interval between the sharp of one note and the flat of the next succeeding, is called a *quarter-tone* or *enharmonic diesis;* and a scale, such as the last example above, is called an *enharmonic scale.* (See SCALE IV.) Thus, to get all the flats and sharps correctly, in one scale, instead of twelve, we must have seventeen notes. Nor is this all. As the tones must vary for each transposed scale, so must the semitones vary to correspond. This would require an enormous number of notes, and render keyed instruments altogether too complicated. It becomes necessary then to consider how the number may be reduced, and what are the fewest, that will

answer. The number commonly used in keyed instruments is twelve, in which the same key is used for the sharp of one note and the flat of the note above, as in the chromatic scale. In Mr. Liston's patent organ, however, (see ORGAN, p. 279, and Edinburgh Encyclopedia, Art. "Euharmonic Organ,") with only twelve keys to the octave, different pipes are used for the notes varying a comma, and the wind is admitted to the desired pipes for any particular key, by means of pedals. But this method is too complicated and expensive for ordinary purposes. Thus, whatever temperament is adopted, we can have only twelve intervals to the octave.

I. EQUAL TEMPERAMENT. If we would have a scale exactly similar to itself in all its parts, and which should admit of our playing equally perfect in every key, we have only to divide the octave into twelve equal intervals, making all the tones equal, the semitones each equal to half a tone. The defect of this system is, it makes all the keys and common chords, whether of rare or frequent occurrence, alike; besides being extremely difficult, and we may say impossible to reduce to practice. (See TUNING.)

II. UNEQUAL TEMPERAMENT. It has generally been considered preferable to preserve some keys more free from error, partly to give each key a distinctive character, and partly because keys with five or six sharps or flats are little used, so that they may safely be left more imperfect, which is termed throwing the *wolf* into those keys. To determine this matter, the late Professor Fisher of Yale college examined several hundred tunes in common use, and enumerated the number of each particular key, and the number of chords both major and minor on each letter, which was published in the first volume of Silliman's Journal of Science. His results were as follows:

	Keys of 1600 scores.		In "the Choir," 666 scores.	
Signatures	Major	Minor	Major	Minor
4♯	42	2	36	0
3♯	95	6	94	0
2♯	200	13	90	2
1♯	322	72	137	9
♮	176	121	86	8
1♭	180	97	120	6
2♭s	70	77	42	10
3♭s	116	8	22	4
4♭s	0	3	0	0

The professor found about one fifth of the chords he examined based on G, one sixth each on D and C, one seventh each on A and F, and one twelfth each on E and B♭. He hence very justly came to the conclusion, that those keys and chords which most frequently occur, as above, should be made the most perfect.

Other systems of temperament have been proposed, but chiefly by mere theorists. The two most noted, are those of Huygens and Dr. Smith; both of which include 21 keys to the octave; viz. one for each natural note, and one severally for each flatted and sharped note. Huygens divides the octave into 31 equal parts; five for each tone, three for each diatonic semitone, two for each chromatic semitone, and one for the diesis. Smith has fifty parts; eight a tone, five a diatonic semitone, three a chromatic semitone, and two the diesis. Both these systems though ingenious, are too refined for common practice. (See TUNING.)

TEMPESTOSO, storming, tempestuous; with vehement execution.

TEMPO, (Ital.) time; movement in regular measure.

TEMPO DI BALLO, (Ital.) in the time of a dance.

TEMPO DI CAPELLA, (Ital.) quick common time in church music; same as Alla Breve.

TEMPO COMMODO, (Ital.) in common time; neither too fast nor too slow.

TEMPO GIUSTO, (Ital.) in exact time.

TEMPO DI MINUETTO, (Ital.) in the time of a minuet.

TEMPO PRIMO, } (Ital.) in the original time;
A TEMPO, } used after an *ad libitum*, or a different movement.

TEMPOREGGIATO, (Ital. delayed,) a pause on a note in an accompaniment, to give the principal performer an opportunity to introduce an embellishment.

TEMPO RUBATO, (Ital.) time alternately accelerated and retarded, or in which, without impairing the measure, the notes are alternately made shorter and longer than their real value, for the sake of effect.

TENDERLY, softly, in a tender manner; addressed to the sympathies of the heart.

TENDERMENT, (Fr.) } a delicate, slow
CON TENEREZZA, (Ital.) } movement; tenderly.

TENOR, the part in music adapted to the higher voices of men; in four voice singing, the part next above the base. (See VOICE.) The *tenor* was formerly the principal melody of a composition, deriving its name from the Latin *tenere*, to hold, to which the other parts were auxiliary. The practice of giving the air to the treble first obtained in the theatre; but as it is the order of nature, female voices in all chorus movements, now universally take the principal part.

TENOR VIOLIN. (See VIOLA.)

TENS, a group of ten notes in the time of eight.

TENSILE, a term applied to stringed instruments, on account of the tension of the cords or wires.

TENSION, a term applied to the stretching of a string by the application of some force, as a screw.

TENTH, the octave of the third. (See INTERVAL.)

TENUTO, (Ital.) sustained. (See SOSTENUTO.)

TERNARY, (from Lat. *tres*, three,) threefold, triple.

TERZETTO, (Ital.) a trio.

TERZO, (Ital.) third; as, *flauto terzo*, the third flute.

TESTUDO, (Lat. the shell of the tortoise,) the lyre of Mercury, so named because he, the inventor, made it of that shell.

TETRACHORD, (Gr. *tetartos*, four, and *chorde*, a string,) a scale of four sounds, the basis of the Greek system. (See *Ancient* SCALE.) The modern scale of the octave is made up of two similar disjoint tetrachords, which in elementary instruction in vocal music, should at first be practised separately. (See "Manual of Instruction.")

TETRATONON, (Gr. *tetartos*, and *tonos*, a tone,) the interval of four tones, or a superfluous fifth.

TEXT, an obsolete expression for the hymn or words set to music.

THEME, a subject on which variations are made; the principal subject. (See SUBJECT.)

THEORBO, an old instrument resembling the lute, but having eight deeper strings, four of which were attached to a second neck.

THEORIST, a scientific musician; one who is conversant with the properties and nature of sound, and with the laws of harmony and composition. A theorist, besides being in other respects a good scholar, should be a mathematician, so as to be able to

calculate with accuracy the proportions of the musical intervals and the ratios of their vibrations.

THEORY, that branch which has for its object the principles of music, of harmony, modulation, and counterpoint. The study of theory is so dry and unprofitable, that it has very few votaries. Young musicians devote whole years to the practical part of music, but neglect the theoretical part.

THESIS, (Gr. *tithemi*, to lower,) the unaccented part of the measure, which the Greeks expressed by the downward beat. (See ARSIS.)

THIN, this term applies to such accompaniments as are written with a view solely to support a vocal or instrumental solo; it also characterizes defective harmony, to distinguish it from that which is rich and elaborate.

THIN TONE, applied both to instruments and voices, in opposition to a rich, full, and round tone.

THIRD. (See INTERVAL.) The thirds are the spirit of harmony, particularly the major, which is sonorous and brilliant; the minor third is more tender and pathetic; a difference of character from which skilful composers derive the best and the most striking effects.

THIRTY SECONDS, demisemiquavers.

THOROUGH BASE, (see *Figured* BASE.) It was invented about the year 1605, by Ludovico Viadana, an Italian, *maestro di capella* at Fano, and afterwards at Mantua.

THRENODIA, (Gr.) a funeral song.

THRILLING, applied to sounds of a sharp and piercing quality.

TIBIA, (Lat.) the ancient flute or pipe; a general term for wind instruments.

TIE, (see CHARACTERS 55, Ex. 14.) It is likewise applied to a slur connecting two notes on the

same degree to be performed as one. Slurs generally, are also called ties.

TIED NOTES, notes connected with a tie.

TIERCE, the interval of a major third ; an organ stop a third above the fifteenth.

TIERCE OF PICARDY, a major third used in the place of a minor, at the conclusion of a tune in the minor mode, so called because the longest continued in the church music of that country.

TIMBALE, (Fr.) the kettle drum.

TIMBREL, the ancient Hebrew drum or tambourine.

TIME, the measure of sounds in regard to their length or continuance. (See MEASURE & RHYTHM.)

GRADES OF TIME. (See MOVEMENT.)

TIME TABLE, a table in which the notes of music and their relative value are illustrated.

TIMEIST, a performer who preserves a just and steady time.

TIMOROSO, (Ital.) a term expressive of awe or dread.

TIMPANI, (Ital. plu.) kettle drums.

TIMPANO, (Ital.) a drum.

TINTINABULA, (Lat. plu.) small bells used by the ancients. (See BELLS.)

TIORBA, (Ital.) (See THEORBO.)

TIPPING, a certain distinct articulation given to the flute, by the performer's striking his tongue against the roof of the mouth.

TIRATA, (Ital. *tirare*, to drag,) the intermediate diatonic notes introduced between the notes of a disjoint interval, distinctly struck in performance.

TOCCATA (Ital. *toccare*, to touch,) an exercise for the organ or piano forte, to improve the touch and execution, written either in a fugue or free style ; also a prelude.

TOCCATINA, (Ital. dimin.) a short simple toccata.

TONE, one of the larger intervals of the diatonic scale, embracing two semitones, a chromatic and a diatonic. (See SCALE.) *Tone* also applies to the quality of sound, as a *thin tone*, a *full tone*, a *mellow tone*, a *harsh tone*, &c.

TONGUE, a term applied to the thin piece of elastic wood or metal, inserted in the mouth piece of a reed instrument or pipe, which modifies the pitch, and gives quality to the tone.

TONIC, the key note, or one of any scale. (See SCALE.)

TONIC CHORD, a chord with the tonic for its base.

TOSTO, (Ital.) quick.

PIU TOSTO, (Ital.) quicker.

TOUCH, a word applied to the manner of striking the keys of a piano forte and organ. The only mechanical means by which a performer is enabled to give expression on the piano forte, or the different lights and shades so essential to the instrument, is by the touch, which may be staccato or legato, brilliant or heavy. No instrument is better able to display the taste and feeling of the performer. Any want of ease, on the part of the performer, will show itself in execution; hence, attention should be paid to the position and ease of motion of the fingers and hand. (See PIANO FORTE II.) Legato and Adagio movements are the most difficult to perform, and require the most attention. The word *touch* is also applied to the instrument itself, to denote the resistance of the key to the fingers. When great force of finger is necessary, it is said to have a *hard* or *heavy* touch; when little force is required, the touch is said to be *soft* or *light*.

TOUCH NOTE. (See ORNAMENTS I.)

TRADOTTO, (Ital.) transposed, arranged anew. (See ARRANGEMENT.)

TRANSIENT CHORD, a chord made up of transient notes. (See *Accidental* CHORDS.)

TRANSIENT MODULATION, a temporary modulation which immediately passes into the original key. (See MODULATION.)

TRANSIENT NOTE, any note that is inserted between the essential notes of a melody, to connect the notes of a disjoint interval, or to diminish the roughness of the leap.

TRANSITION, a passage by transient notes. *In harmony*, transition is the regular passing from one key or mode to another, the same as Modulation.

TRANSPOSITION, the change made in a composition, by which the whole is removed into a higher or lower key, as the compass of the voices or instruments may require. (See SCALE II, p. 343.)

TRAVERSO, (Ital.) a German flute. (See FLAUTO TRAVERSO.)

TRE, (Ital.) three; as, *a tre*, for three voices or instruments.

TREBLE, the highest part in music, taken by the highest female or boys' voices, and by the highest instruments, as violins and flutes.

TREMANDO, (Ital.) trembling; a kind of shake of the whole chord. (See ABBREVIATIONS p. 10, and Ex. 12.)

TREMBLANT, a movable machine or buzz, placed in the principal channel of the wind chest of the swell organ; which being disengaged by a stop, turns on its axis, and gives the sound a trembling or beating effect.

TREMOLO, (Ital.) a rapid reiteration of the same note, in imitation of the beatings of an organ. (See

ABBREVIATIONS, p. 10, Ex. 9.) The tremolo in a symphony, produces a fine effect on the violins and violoncellos, while the wind instruments sustain some long notes.

TRI, (Lat. *tres*, three,) used in compound words, denoting a three fold division; as, *triangle*, a figure with three angles, *trisected*, cut into three parts, &c.

TRIA HARMONICA, (Lat.) the harmonic triad, and

TRIAD, a chord consisting of a fundamental note, and of its third and fifth; if either of these intervals is doubled, it is still called a triad. (See CHORDS 44, p. 92.)

TRIANGLE, an instrument of percussion, made of a rod of polished steel, bent in the form of a triangle, hence its name. It is open at one of the corners. In playing, it is suspended by a string attached to another corner, and struck from side to side internally, by a small steel rod. It is used in military bands, simply as a rhythmical instrument.

TRILL and TRILLO, (Ital.) a shake. (See SHAKE.)

TRILLANDO, (Ital.) with trills or shakes.

TRIO, a composition for three voices or instruments, one on each part.

TRIOLE, a triplet.

TRIPLE, (Lat. *tri*, and *plico*, to fold,) three fold.

TRIPLE COUNTERPOINT, applied to a composition in which either of three parts may become base, or in which the parts may be inverted according to rule.

TRIPLE TIME, time with three parts to a measure. (See MEASURE.)

TRIPLET, a group of three notes in the time of two. (See CHARACTERS, Ex. 37.)

TRITONE, (*tri*, and tone,) an interval consisting

of three tones, or the sharp fourth. (See INTERVAL, Ex. 31.)

To TROLL, to move circularly; to take the parts of a catch, canon, or round, in regular succession, or in a circular motion.

TROMBA, (Ital.) the trumpet.

TROMBETTA, (Ital. dimin.) a small trumpet.

TROMBONE, (Ital. a base trumpet,) a deep toned wind instrument of the trumpet species; consisting of three tubes; the first to which the mouth piece is attached, and the third with a bell, are placed side by side and parallel; the middle tube is doubled, and slides into the other two, like the tube of a telescope. There are several sorts of trombone: 1st, *Base Trombone*, whose compass is from Bb below the base staff, to F, first space treble staff; 2d, *Tenor Trombone*, extending from G, first base line, to G in the treble staff; 3d, *Alto Trombone*, extending from F in the base, to C in alt; a *Treble Trombone* is also used. As these instruments can be lengthened or shortened at pleasure, by the tubes sliding one within the other, every semitone of the scale can be performed; which imparts a sliding or vocal effect, not to be obtained on any other wind instrument. The sounds of these instruments when combined, have an imposing effect, and give great power and brilliancy. But instruments of such tremendous power, should be sparingly used, and never accompany voices except in full chorus. Their appropriate place is in a symphony or overture, or in a band. The model of the modern trombone was found in the ruins of Herculaneum; and is supposed to be the ancient sackbut.

TROMMEL. (German, a drum,) a term applied to a base which has the same note repeated, in a quick manner, through several measures.

TROOP, a military air, suitable for marching in quick time.

TROPPO, (Ital.) too much; used to qualify the preceding word; as, *allegro ma non troppo*, allegro but not too fast.

TROPPO CARICATA, (Ital.) applied to an air overburdened with accompaniments.

TROUBADOURS, ancient bards in the west of Europe.

TRUMPET, the loudest of all wind instruments, consisting of a folded tube generally of brass. (See Horn V.)

TRUMPET MARINE, a kind of monochord; a rude instrument with a triangular body, and a long neck, mounted with only one string, which crosses a bridge that is fixed at one end and movable or tremulous at the other. This string is pressed by the thumb of the left hand, while the right draws the bow. The peculiarity of its sound resembling a trumpet, is produced by the trembling of the bridge.

TRUMPETER, a performer on the trumpet.

TUNABLE, applied to those pipes, strings, and other sonorous bodies, which from the equal density of their parts, are capable of being perfectly tuned.

TUNE, a rhythmical succession of musical sounds agreeable to the ear; an air.

In TUNE, a term applied to a voice or instrument which gives all its tones true or at the right pitch. A voice or instrument is *out of tune with itself*, when it gives some intervals false, compared with the key note; and *out of tune with others*, when it gives the key note and consequently the whole scale wrong. (See False intonation.)

TUNEFUL, melodious; as tuneful birds.

TUNER, one whose profession it is to tune piano fortes and organs. The qualifications for a tuner,

are a correct and cultivated ear, and a practical knowledge of temperament.

TUNING, adjusting the notes of an instrument, according to the nature of the instrument and the principles of temperament. (See TEMPERAMENT.) To show the necessity of temperament, we may take for instance a piano forte, and commence with C in the base staff. If we tune upwards from C or 1 by fifths; viz. from 1 to 5, then from 5 to 9 and down an octave to 2; from 2 to 6, from 6 to 10 and down to 3, and so on; we shall find that after taking twelve such steps by fifths, we shall have taken every note of the scale, and shall have come back to the fundamental note or octave. But no series of steps by *perfect* fifths can ever bring us to one of the octaves of the fundamental note. Were the chromatic scale perfect, twelve fifths would exactly equal seven octaves; and three major thirds would precisely make an octave. Neither of these however can be true of *perfect fifths* or *thirds*, (see TEMPERAMENT, Ex. 2,) for 31 x 12 equals 372, and 53 x 7 equals 371; and 17 x 3 equals 52, and the octave equals 53. Thus, if we reckon by perfect fifths, we surpass the octaves; if by thirds we fall continually below them. Hence, we cannot tune by perfect fifths or perfect thirds. Tuners are aware of this difficulty; and hence, commonly without any system or knowing the reasons why, they tune the fifths a little flat. On viols, it is well known, that if the strings are tuned by perfect fifths, the first string will be too high for the fourth. In practice then, they modify them, that is, make the fifths a little flat, but usually not equally so, as the same viol in tune for one performer, is often not so for another; and the open strings in tune for one key, are not equally so for others. The same is also true of the piano forte and organ. In other words, the tempera-

ment is not equal, though commonly professed to be; and the inequality is usually such as the ear, not the scientific knowledge of the tuner, determines to be the best. For the reasons already given, (see TEMPERAMENT I,) tuning

I. BY EQUAL TEMPERAMENT is undesirable and impracticable. We must hence tune,

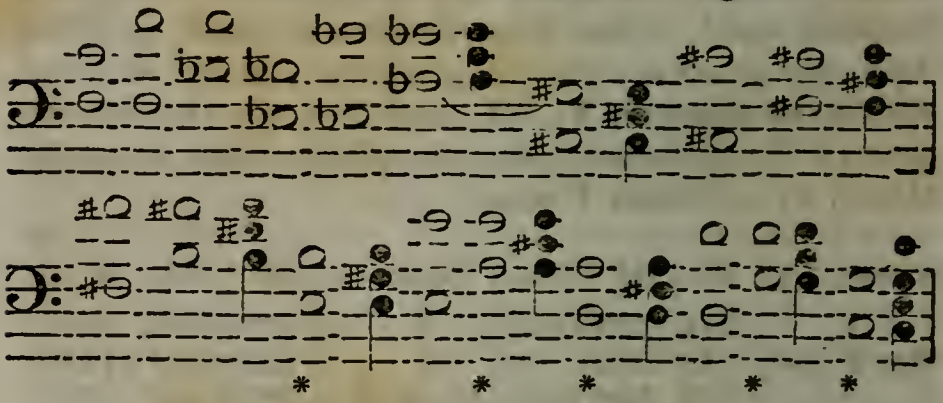
II. BY UNEQUAL TEMPERAMENT, that in which some intervals are tuned more perfect than others. Those should be tuned the most perfect which are the most used. (See TEMPERAMENT, Ex. 7, p. 392.) The following are the comparative number of times which the intervals V, III, and 3 occur, on each degree of the chromatic scale, in 1600 scores, as ascertained by professor Fisher.

Bases	V	III	3	Bases	V	III	3
B	221	135	1161	F	639	924	78
B♭ & A♯	448	654	34	E	548	323	1151
A	870	568	1085	E♭ & D♯	265	363	149
A♭ & G♯	57	82	365	D	1166	943	569
G	1207	1197	567	C♯ & D♭	26	12	581
F♯ & G♭	67	29	1072	C	816	1131	180

V stands for perfect fifth; III for major third; and 3 for minor third.

The octave will bear no temperament; and in general, the more perfect the interval, the less temperament it will bear. The necessity of the case also obliges us to temper the imperfect more than the perfect intervals. Twelve fifths but little surpass seven octaves: but three major thirds fall nearly a quarter-tone short of an octave; and four minor thirds overrun an octave, nearly a third of a tone. The more perfect the fifths are in any scale, the more imperfect will be the thirds: hence, to preserve the thirds most used from great imperfections, we are obliged slightly to temper the fifths in those scales. The fol-

lowing is perhaps the best practicable method of tuning, so as to render those intervals the most perfect which are the most used; and at the same time, preserve all even the most remote from a greater degree of imperfection than a comma. We commence with middle C, and tune downwards by perfect fifths, (see MONOCHORD,) taking the octaves when necessary, until we arrive at B; after which we take the fifths marked* a little flat, not more than a fifth of a comma or the 40th part of a tone, until we arrive at C again. Thus:



The crotchets are proof chords. If in the last chord, the two Cs harmonize, the tuning is correct; otherwise it must be gone over with again.

According to this method, no interval varies more than a comma from the truth; and excepting the fifths, those most tempered are least used. The major thirds from C to E, and G to B, vary from the true only 1:5th of a comma; those from D to F♯, and F to A, 2:5ths; from A to C♯, and B♭ to D, 3:5ths; and from E to G♯, 4:5ths. The minor thirds, from E to G, A to C, and B to D, vary 2:5ths; D to F, and F♯ to A, 3:5ths; and C♯ to E, and G to B♭, 4:5ths of a comma. Their complements, the minor and major sixths of course vary in the same manner.

Stringed instruments are tuned by tightening or slackening the strings; the former of which raises the sounds, and the latter lowers them. (See STRINGS.)

Wind instruments are tuned by varying the length of the pipe, or partially closing or opening it. (See Pipes 6.) In varying the length of an instrument with holes for the fingers, as the flute, particular care must be taken to lengthen the tube at all the joints, otherwise some of the sounds will be incorrect. Pulsatile instruments are tuned by making them more compact or by diminishing the length, which raises the tone; and by expanding or making thinner and longer, which lowers the tone.

TUNING FORK, a small steel instrument, about three inches long, consisting of two prongs and a handle. When struck and placed upright with the handle on a table or other solid body which answers the purpose of a sounding board, it produces a clear and distinct sound. For tuning stringed instruments, such as the violin, and for vocal music, it is usually pitched on A; for tuning piano fortes, and other purposes, on C. The instrument was invented by John Shore, sergeant trumpeter to George I.

TUNING HAMMER, an iron utensil, used by piano forte tuners, about six inches long, and shaped something like a hammer: at the end of the handle, is a square hole adapted to the square ends of the iron pegs to which the strings are attached; by turning which, the strings are tightened or relaxed to adjust their pitch.

Alla TURCA, in the Turkish style.

TURN. (See Ornaments 11, p. 298.)

TUTTI, (Ital. plu.) all; after a movement for single voices or instruments, it denotes that all the voices or instruments are to be introduced.

TWELFTH. (See Interval 55, Ex. 20.)

TYE. (See Tie.)

TYMPANUM, (Lat.) a drum. (See Timpano.)

TYRO, a beginner or learner.

U.

UGUALE, (Ital.) equal, just, applied to time.

ULLALOO, one of the Irish vocal deplorations over their dead.

UN, UNA, UNO, (Ital.) one, a; as, *un poco*, a little.

UNACCENTED, applied to those notes of a measure, on which the stress or force is not laid. (See ACCENT.)

UNACCOMPANIED, applied to an air or recitative sung without instruments.

UNDER PART, that part of a duet, trio, &c. which is subordinate to and below the others.

UNDULATION, (Lat. *undula*, to wave,) the agitation of the air occasioned by the vibration of a sonorous body; so called because it progresses like a wave from a center.

UNHARMONIOUS, dissonant, discordant.

UNISON, (Lat. *unus*, one, and *sonus*, a sound,) the same sound in point of pitch, made by two or more voices or instruments. (See SOUND.)

UNISON, UNISONS, or UNISONI, (Ital. plu.) written under a passage, shows that all the parts of the score must be performed in unison or octaves, that is, without chords: when written on the second instrumental staff, it denotes that the two instruments play in unison; when written on the first instrumental staff, the instrument plays in unison with the voice. Passages in unison have a fine effect in a full animated chorus.

UNISONO, (Ital.) unison; plural, *Unisoni*.

UNMELODIOUS, applied to any succession of notes not forming an air, nor producing an appreciable effect.

UNMUSICAL, applied not only to all jarring and discordant sounds, but to whatever is not harmonious, melodious, or agreable to a cultivated ear.

UNSTRUNG, said of any instrument from which the strings have been taken or relaxed ; also, of the human organs of sound when in a lax state.

UNTUNABLE, applicable to those pipes or strings which from some flaw or inequality cannot be brought exactly to a unisonous pitch.

UPPER PART, the treble, or the highest part in any duet, chorus, &c.

V.

V. An abbreviation of violin ; and for the plural, violins, VV is used.

VALSE, (Fr.) a waltz.

VARIAMENTO, (Ital.) in a free and varied manner.

VARIATIONS, a term applied to ornamented repetitions or free imitations of any air or subject, in which, while the original notes and harmony are in some degree retained, the passages may be branched out in ornaments, and the time, mode, and number of notes may be changed ; always returning however to the original close. The only use of variations is as exercises to acquire a facility in execution.

VARIAZIONI, (Ital.) variations.

VAUDEVILLE, (Fr) a French ballad.

VELOCE, (Ital.) swift. (See PRESTO.)

VELOCISSIMO, (superl.) same as Prestissimo.

VENTRAL SEGMENTS, intermediate portions of a string which vibrate between the nodal points. (See Nodes.)

VERSE, an appellation given to those parts of an anthem to be performed by a single voice to each part: also, a stanza, or one of the divisions of a hymn to which music is set in psalmody.

VESPERS, (Lat. evening,) name of the last evening service in the Romish church, consisting chiefly of singing.

VIBRATION, the tremulous motion of any sonorous body by which the sound is produced. The vibratory action being communicated to the air, the latter becomes the vehicle by which the sound is communicated to the ear. The sound is grave or acute, as the vibrations are fewer or more numerous in a given time. (See Sound.)

Vibrations of systems, or communication of vibrations, and coincidence by sympathy. 1 *From one part to another of the same instrument.* The vibrations of the strings of a violin, for instance, are communicated through the bridge to the body of the violin, which vibrates by sympathy in unison with the string. The strings which are stretched from end to end of it, are divided into two unequal parts by the bridge, on which they press strongly, and at the same time rest in small notches so as not to slip laterally on it. That portion of the string which lies towards the head of the instrument is free, and is set into vibration by the bow; but that part on the other side of the bridge, is loaded with a mass of horn, to which all the other strings are attached, and which being only tied to the wood work, cannot propagate the vibrations of any one string sounding separately, by reason of the unequal tensions of the other three. Thus, the bridge is in fact acted on only by the up-

per part of the string, which is vibrated by the bow. These vibrations constantly tend therefore to tilt the bridge laterally, and to press up and down alternately the feet of it by which it rests on the body of the violin. It therefore sets the wood of the upper surface into a state of regular vibration, and this again is communicated to the back through its sides or its sounding post. If the surface of the sounding board is made flat, on which sand may rest, the sand strewed upon it will divide itself into regular nodal figures, when the surface is set into motion by the string. When a different string is made to sound or a different sound is made, the nodal figures of sand on the surface undergo a corresponding variation, and the sounding board still vibrates in unison with the string; or which is the same thing, the two together with the interposed bridge, form a *vibrating system*, in which, though the vibrations of the several parts are necessarily very different in their nature and extent, yet they have all the same periods. This principle is very important. It shows that the sounds of thin plates such as a sounding board are not confined like those of strings, to certain fixed harmonics, but may assume any period; in other words, with a given pitch, the plate with more or less readiness, is always susceptible of such a vibration as shall yield that note. This remark furnishes a complete explanation of the effect of sounding boards in musical instruments; the whole board vibrates as part of a system with every note. The same board may also at once form a part of any number of systems, and vibrate in unison with every note of a chord. Still some modes will always be more difficult than others; and no sounding board will be perfectly indifferent to all sounds.

2 *Communication from one body to another.* It is a

general fact, that when one vibrating body is brought into intimate contact with another, it communicates to it its own vibrations, more or less effectually in proportion as their unison is perfect. Thus, if a tuning fork while in a state of vibration is brought into contact with a plate of glass, it will communicate its vibrations to the glass, and the sound will be redoubled. Again, if a small musical box is placed on the glass of a show box, for instance, every note of the instrument will produce a distinct vibration of the glass in unison with itself, though some notes will be more full and clear than others. Two strings tuned in unison, whose vibrations do not commence at the same instant, will by their mutual influence or their tendency to vibrate in a system, soon coincide; so also two pipes of an organ. Thus likewise two organ pipes or two strings vibrating side by side, if very nearly in unison, will under certain circumstances force themselves into exact concord. Ellicot observed that two clocks fastened to the same board, or even standing on the same stone, beat constantly together; though when separated, their rates were found to differ very considerably; and Bregret has made the same remark on watches.

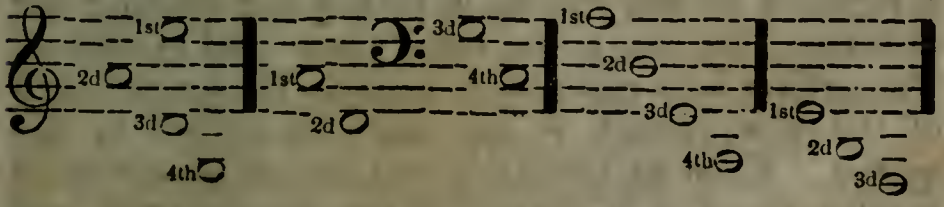
3 *Communication with the ear.* The tympanum or drum of the ear in the same manner vibrates to correspond with any sound communicated to the ear, and forms part of a system. If the drum is so rigid as not to be able to vibrate in unison with a very acute sound, no sound will be heard. (See Ear.)

VIGOROSO, (Ital.) in a bold and energetic style.

VIOL, a general term to denote instruments played with the bow. As the ancients were ignorant of the use of the bow, the viol must be a comparatively modern invention. Formerly, the viol had five or six strings, and its tones were regulated by frets.

The first violin or viol without frets, was introduced into the orchestra about two hundred years ago; when it was pronounced a mere bauble, never likely to be used in the performance of music with any success. But the removal of these mechanical helps, has conferred on viols a power of expression never contemplated by our forefathers. Their sounds are not limited to the semitonic intervals, like the organ and piano forte; but they are perfect instruments, which in the hands of artists can express the quarter-tones, and all the variations of temperament. (See TEMPERAMENT.) All viols are constructed essentially on the same principles, and are performed on in a similar manner; that is, they are played by drawing the bow across the strings with the right hand, while the fingers of the left hand regulate the notes, by stopping the strings at proper distances. These instruments consist of a thin body usually of tough maple; the Sounding board, which receives the vibrations through the bridge, (see VIBRATIONS;) the Bridge; the Tail piece; the Head; the Screws; the Finger board; the Nut; the Strings; and the Bow. (See these several articles.) The strings of most viols are tuned by fifths. The modern violone or double base however, is tuned by fourths. The following are the notes of the open strings of the viols now in use.

Ex. 1 Violin. 2 Viola. 3 Violoncello. 4 Violone.



In performance, the stops are made at the harmonic distances pointed out under Monochord, and Strings V. We shall be more particular below.

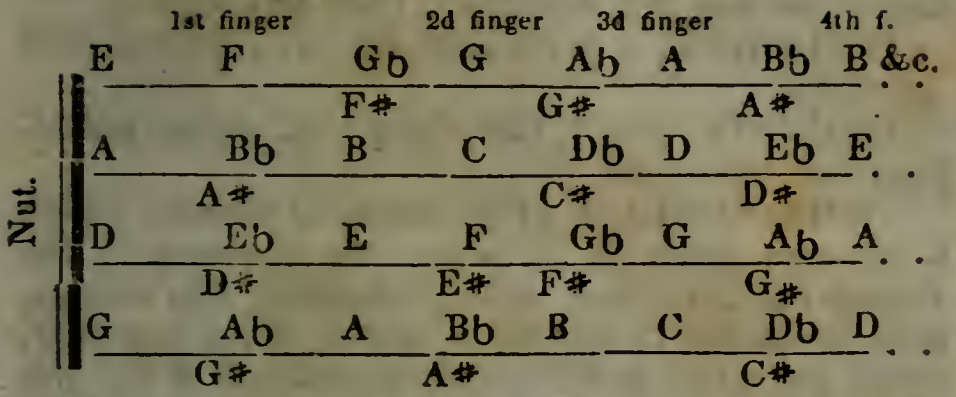
VIOLA, (Ital.) } a viol between the violin and
TENOR VIOL, } violoncello. Its four strings are tuned by fifths, to C in the base, G, D, and A, Ex, 2, above. In the orchestra, it serves to fill up the vacuum between the treble and the base.

VIOLA DA BRACCIA, (Ital. *braccia*, the arm,) the arm viol, the same as the preceding in distinction from

VIOLA DA GAMBA, (Ital.) a baritone or small base viol, formerly in use, having six strings; so called from being placed between the legs in performance.

VIOLIN, a well known instrument of great power, and the leading instrument in the orchestra. Its four strings tuned by fifths, are G fourth space base staff, D, A, and E, Ex. 1 above. Its compass in skilful hands may extend to D in altissimo; and all the chromatic notes within that compass can be produced. The violin had its origin in Italy, about the war 1600. The best instruments were made about 1650, at Cremona, by the Amati and by Stradvarius: but their age is probably the principal cause of their superiority of tone. The most striking powers of the violin may be said to reside in the bow. The great range of its effects entitle it to the first consideration among musicians. The period at which it has made its greatest advances toward perfection, is in connexion with the cultivation of the female voice. From the voice it received its first lessons in pathos and feeling; and in return, has taught the voice grace and execution. To perform with expression, requires the magic touch of the bow, which is not easily described or acquired. From its brilliancy and ease of execution, it is often found in the hands of the uncultivated, and hence by many is considered a vulgar instrument; but no instrument is so capable of displaying the taste and accuracy of the performer as the violin. The following is the

SCALE FOR THE VIOLIN.



The stop for each semitone is about half an inch, but the greatest the nearest the nut, and a sharped note falls short of the next flatted note above. The fifth, as from G to D, whatever the instrument, is always a third of the string: so that, in tuning by fifths, one string should be in unison with the next below stopped at one third its length. In tuning the pitch, A, is taken from a fixed instrument or an A tuning fork, and the second string is tuned to it: then the D and G strings are successively tuned at fifths below, and the E string a fifth above. In playing, in any key, the first finger is used for the first note above the nut, the second for the next, and so on to the fourth finger, which may take the fifth or the same note as the next string above. Sharped and flatted notes are stopped by the same fingers as the principal notes. When the notes ascend higher than B on the first string, the hand is *shifted*, or moved up on the finger board, to such a distance that the fourth finger can reach the highest notes: in this case, the open strings are not used, but the strings must take such notes as are within the reach of the hand when shifted. In bowing, care must be taken to draw the bow near the bridge, and at right angles to the strings. The bow should be drawn outwards at the accented part of the measure, and moved back on the unaccented.

Legato passages should be played with but one drawing of the bow at a measure. (See STACCATO.)

VIOLINIST, a performer on, or a professor of he violin.

VIOLINO, (Ital.) the violin; as, *violino principale*, the first violin.

VIOLONCELLO, (Ital. dimin. of *violono*, which name was given to it, before the invention of the *Double base*,) the base violin, containing four strings, tuned to double C, and G, D, and A, in the base staff, which are taken by fifths downwards from A the first string, Ex. 3 above. The two lowest strings are commonly wound with wire to give them weight. The stops are made in a similar manner to those of the violin, but the distances are about twice as great; consequently in fingering, the hand must have some motion, which is regulated by the fixed position of the thumb that acts as a pivot. The tone of the violoncello is of the most rich and mellow kind, and gives scope to the finest expression of the composer and the performer. As an accompaniment for the voice, it possesses peculiar excellencies; and in skilful hands, it has a fine effect as a solo instrument.

VIOLONO, (Ital.) the double base; a very large and powerful instrument originally with four strings, the same as the violoncello, but an octave below. At present, it has usually but three strings tuned by fourths; viz. double A, double C the same as the lowest on the violoncello, and G, Ex. 4 above. This bulky instrument is not well adapted for the performance of rapid passages, both on account of the distance of the stops, and the time taken to give the strings an active vibration. Its prominent properties are strength and grandeur, by which it gives to the orchestra a body of sound, not to be obtained without it. As force and time are principally marked by the violono, it

follows, that it should be placed only in the hands of an energetic, prompt, and skilful performer.

VIRGINAL, the original name of the spinet.

VIRTU, (Ital.) taste and address in performance.

VIRTUOSO, (Ital.) a great performer on any instrument; one who delights in and has a taste for music.

VISTA, (Ital.) sight; as, *a prima vista*, at first sight. No performer can give a composition its true expression at first sight: he cannot enter into all its bearings, points, and delicacies; his attention must be wholly employed in decyphering the words and the notes; therefore, a pretension to singing or playing every thing at sight, is mere affectation and vanity.

VIVACE, (Ital.) quick; in a brisk, light, and elegant style.

VIVACISSIMO, (Ital. superl.) of the liveliest description, both as regards touch and time.

VIVO, (Ital.) with life and animation.

VOCAL, appertaining to the voice.

VOCAL MUSIC, music for the voice, in contradistinction to instrumental music.

VOCALIST, a singer.

VOCALITY, quality of being uttered by the voice.

To VOCALIZE, to sing with the vowel sounds without words or syllables, designed to improve the organs and tone of the voice. It is necessary to exercise on all the vowel sounds, in order to produce each one of them clearly and forcibly. In singing, the vowel sounds only are to be sung; the consonants should be simply articulated. (See "Manual of Instruction.")

VOCE, (Ital.; Lat. *vox*, *vocis*,) the voice, the tone. (See Voice.)

VOCE DI CAMERA, a feeble voice, which is only calculated to sing in a private room.

VOCE DI PETTO, (Ital. *petto*, the breast,) the voice from the chest, the natural voice, in distinction from the *falsetto*, or feigned voice.

VOCE DI TESTA, (Ital. *testa*, the head,) the voice from the head; and in men, the *falsetto* or feigned voice.

VOCE SOLA, (Ital.) the voice without accompaniment.

VOICE. Almost every animal has a voice or cry peculiar to itself, originating in an apparatus of more or less complexity destined for that purpose. The voice is the most perfect and varied in man and in birds; which however differ extremely in the degree in which they possess, this important gift. In quadrupeds, it is limited to a few uncouth screams, bellowings, and other noises perfectly unmusical in their character; while in many birds, it assumes the form of musical notes of great richness and power and even of articulate speech. In the human species alone, and that only in some rare instances, we find the power of imitating with the voice every imaginable kind of noise with a perfect resemblance, and of uttering musical tones of a sweetness and delicacy attainable by no instrument. But in all without exception, (unless perhaps the chirp of some insects is an exception,) the sounds are produced by a *wind instrument*, by the column of air contained in the mouth, throat, and front part of the windpipe, set into vibration by the issue of a stream of air from the lungs, through a membranous slit in a kind of valve placed in the throat. In man and in quadrupeds, this organ is single; but in birds it is double, a valve of the kind above mentioned being placed at the opening of each of the two great branches into which the trachea divides itself as it enters the lungs just before they unite in one common windpipe.

I. The organs of the voice in man consist of

1 *The thorax*, which by the aid of the diaphragm and the 24 muscles attached to the ribs acting on the lungs within and alternately enlarging and contracting them, performs the office of a bellows.

2 *The trachea* or *windpipe*, a cartilaginous and elastic pipe, which terminates in the lungs by an infinity of roots.

3 *The larynx*, the upper extremity of the thrachea formed into a species of head situated in the throat. It is composed of five elastic cartileges of which the uppermost is called,

4 *The epiglottis*, whose office is to open and shut, like a valve, the aperture of the exterior glottis, and which constitutes the orifice of the larynx. The epiglottis, where it adheres to the larynx, is also united to the tongue, and forms somewhat of a concave valve of a parabolic form, whose base is towards the tongue, and which by its convexity resists the pressure of the food and liquids, as they pass over it in the act of swallowing.

5 *The glottis*, within the larynx rather above its middle, are two elastic ligaments, like the parchment of a drum, split in the middle, and forming an aperture making a right angle with the exterior glottis, and which is called the interior or true glottis. This slit in adults is about four fifths of an inch long, and a twelfth of an inch broad. The aperture is provided with muscles, which enlarge and contract it at pleasure, and otherwise modify the form of the larynx.

6 *The mouth*. The tongue, the cavity of the jaws, the lips, teeth, and palate, and the uvula or a hanging conical muscular body performing the office of a valve between the throat and nostrils, are all concerned in modifying the breath, as it issues from the larynx, and in producing the various consonants and vowels,

according to the different capacities and shapes of their internal cavity.

II. Production of sounds. 1 *Use of the glottis.* The pitch of the sound is chiefly dependent on the glottis. The membranes of which it is composed are kept at a greater or less state of tension by the muscles with which it is provided, and its opening is expanded or contracted according to the degree of gravity or acuteness of the sound to be uttered. The tone thus originally produced by the glottis, is sustained and reinforced by the column of air in the larynx, throat, and mouth, whose dimensions and figure are susceptible of great variations, by the action of the innumerable muscles which give motion to this complicated and intricate part of our frame. Thus, in a general way, we may conceive how the voice is produced and modified.

2 *Grave sounds.* How, we may naturally ask, can tones of such gravity as we hear produced by the human voice, be excited in such a short column of air as that contained in the throat of a man? The vibrating column here hardly exceeds a few inches in length, yet the notes produced by a base singer are those which would require a pipe as many feet in length, sounded in the usual manner. That it is not a mere relaxation of the membrane of the glottis is evident; the dropping of the lower jaw, and the effort made in every possible way to increase the dimensions and diminish the tension of the throat and fauces generally, in singing the lower notes of the scale, sufficiently prove that the note of the glottis is reinforced, in this case as in that of acuter sounds, by the resonance of the cavity in which it sounds.

3 *Experiment of Savart.* In short pipes and cavities whose other dimensions bear a considerable ratio

to their length, the tone yielded is rendered much graver, when the pipe or cavity is constructed of a flexible material capable of being agitated and set into vibration by the air, than when made of more rigid materials. M. Savart constructed a cubical box pipe, with paper stretched on slight frames of wood joined together at the edges, and made to speak by a hole at the edge. He then observed, that so long as the paper was tightly stretched, the sound yielded by the cube was nearly as acute as it would have been had the whole been rigid; but that when its tension was diminished by exposing it to moist vapor, or even by wetting it, the sound descended in the scale, by an interval proportioned to the degree of moisture the paper had imbibed. It was thus lowered two whole octaves, when it grew so feeble as to be no longer audible. But repeating the experiment in the still of the night, it could yet be heard; and no limit indeed then seemed set to the descent of the sound.

4 *Application to the organs.* The relaxation then or increase of tension of the soft parts which form the cavity of the mouth and larynx, is no doubt the principal cause of the graduation of the tones. Whoever will sing open mouthed before a looking glass, will not fail to be struck with the extraordinary contraction of the uvula (a small pendulous substance that seems to hang down from the roof of the mouth) which takes place in the higher notes. It shrinks up almost into a point, and every surrounding part seems to partake of its tension.

5 *Further illustration.* The instrument which bears the greatest analogy to the larynx, is a species of tin whistle, shaped like a drum; a hollow cylinder about three fourths of an inch in diameter, closed at both ends by flat circular plates having holes in their

centers. The form is not of much importance; it may be made hemispherical. Being held between the teeth and lips, the air is blown through it, and sounds are produced, which vary in pitch with the force of the blast. If the air is conducted through it by a *porte vent* or small pipe, and cautiously graduated, all the sounds within the compass of a double octave may readily be obtained from it: and if great precautions are taken in the management of the wind, tones ever yet graver may be produced so as to admit in fact no limit in this direction.

III. Varieties of voice. Voices may be divided into two classes; viz. *grave* and *acute*. The most striking difference between them is an octave; the acute voices singing eight notes above the grave, when they appear to sing in unison. The acute voices are those of females and boys; and the grave those of men. Each class is commonly divided into three species. The *acute* voices are,

1 *Soprano* or *first Treble*, whose natural compass extends from middle C, to A or B in alt, and in some solo singers even higher.

2 *Mezzo Soprano* or *second Treble*, whose natural compass extends from A, fifth base line, to E or F.

3 *Contralto* or *Alto*, extending from E or F in the base, to B or C in the treble.

In common four voice singing, the second treble and alto are the same, and embrace the lower female and the boys' voices. The *grave* voices are,

1 *Alto* or *Counter Tenor*, the same as 3 above, but performed by men, commonly in the *falsetto* voice, the tone of which is similar to an overblown flute or organ pipe. This fictitious voice is abandoned by composers of the present day, as being devoid of strength and expression. The highest man's voice now used is therefore the

2 *Tenor*, whose compass is from C in the base, to G in the treble. Sometimes two tenors are used, called the first and second tenor, the same as two trebles. The name *Baritone* is sometimes given to a voice between the base and tenor.

3 *Base*, which extends from E or F below the base staff, to D above. A base voice still lower is called a *contra* or lower *base*.

The voices of women are more active, and better adapted for execution, than those of men ; while those of the latter have more passion and pathos. The natural qualities of the voice are as various as they are innumerable ; we seldom met with two alike. For the qualities of a good tone, and the manner of improving the voice in singing, see "Manual of Instruction."

To VOICE A PIPE, a term used by organ builders, denoting a process by which organ pipes are made to sound the given note, in a free and just manner.

VOLATA, (Ital.) a rapid flight of notes on one syllable. (See CADENZA.)

VOLTA, (Ital.) time or turn : as, *volta prima*, the first time. (See CHARACTERS 34, Ex. 30.)

VOLTI, (Ital.) turn over [the leaf.]

VOLTI SUBITO, (Ital.) turn over quickly ; a term used when the page ends in the middle of a strain in quick time.

VOLUME, applied to the voice, sometimes denotes the extent or compass from the lowest to the highest musical sound it can give, (see COMPASS :) more commonly, its fulness of tone or its power ; as, such a performer possesses a rich volume of voice.

VOLUNTARY, an extempore or free performance on the organ, which is introduced as an incidental part of public worship ; so called, because it was

originally left to the option of the organist, whether or not to perform it. This species of music, though necessarily limited to a gravity and solemnity of style, yet admits of considerable variety. Much is left to the fancy, taste, and judgment of the composer; and if in the aggregate he preserves a sufficient degree of dignity, seriousness, and science, not admitting any lighter passages than are calculated to relieve the more solemn parts, he may be said to keep within the place prescribed by the sacred use, for which the organ is so truly fitted and designed. During the time alloted to the introductory voluntary, the people are in a great measure at the mercy of the organist. According to the tenor of his performance, their minds may be solemnized or dissipated, and their devotion elevated or suppressed. By the solemn chords of the closing voluntary, the salutary impression made by the forcible peroration of the discourse may be riveted on the soul; while on the other hand, by one deadly sweep of the same voluntary, the impression may be driven away, 'as the early dew.'

1 *The Introductory Voluntary*, the organist is accustomed to begin as soon as the clergyman enters the church, and to continue until it is time for the other exercises to commence. Its character should be grave and solemn, abounding with full close wrought harmony rolled forth from the great organ, designed rather to inspire reverential feelings, than to arrest the attention by brilliant and ever changing sounds. The most plausible objection to the introductory voluntary is, that it may interfere with the private devotions suitable for christians on entering the sanctuary. If the music is suited to the occasion, such will not be the fact; if the heart is in a right frame, instead of dissipating or checking its fervor, it tends to increase it. But if the heart is not engaged,

there will never want occasions to draw aside the thoughts from devotion: and this the more without the organ than with, arising from the confusion necessarily attendant on the assembling of the congregation. It is hence no trifling virtue of the opening voluntary, that it serves to conceal these trifling disturbances, such as the opening and shutting of the doors, the trampling of feet, &c. It checks, moreover, the too frequent habit of conversation before the services, the salutations and little gossiping of acquaintances and friends, affords thought for the vacant, and recals the attention to the sanctity of the place. Thus instead of distracting, it tends to draw the attention from trifles, and to fix them on serious things.

2 *The Concluding Voluntary*, which accompanies the retiring congregation, should be full, so as to overpower the many confused and jarring sounds of a congregation in motion, but simple and solemn, so as not to divert the attention from the subject of the discourse, (see above.) This opportunity, however, is too apt to be seized upon by an unthinking organist, as a time to display the full powers of the instrument. He is unsparing in the use of his pedals, he gives voice to every stop, and puts every finger in requisition to fill up the chords; which gives his music a loud storming character; thus showing that his main object is to make a display and to astonish, rather than to edify.

3 *The Prelude*, is the name given to the extempore chords played by the organist before the psalm. The prelude should be short, soft and harmonious, and adapted to the tune to be sung, consisting of a few opening chords. The best prelude is unquestionably the simple tune itself; which tends not only to bring the mind into a suitable frame, but informs and pre-

pares the ear. Some organists, however, are apt to overwhelm the tune under every kind of ornamental flourish, so as totally to destroy the intended effect.

4 *The Interlude*, between the verses, should be of a character to give the congregation a momentary repose, or to carry out in a simple and natural manner the subject of the verse. Interludes between the lines are useless. If any two verses are intimately connected in sense, the interlude should be omitted, and the singing continued. The temptations for display, in this case also, are to an unsanctified heart almost irresistable.

The want of a proper devotion in our organists, and the evils which it necessarily entails, are causes of objection to the voluntary; and it is obvious that the organist without a sense of obligation can hardly fail to trench on the feelings of the devout. His eagerness to display himself and his instrument, will necessarily blind his eye to consequences, the nature of which he cannot estimate. The violations of sound taste of which he is guilty, are so varied as to defy distinct enumeration. The constant changing of the stops, with combinations frequently abrupt and whimsical, as though the assembled congregation were a band of professors and amateurs; the fanciful use of the swell, the introduction of long straggling cadenzas, profusion of ornament, arpeggio and piano forte passages may be noticed among the numerous faults. (See ORGANIST.)

VOWELS are the only elements by which a singer is enabled to prolong a uniform sound, or to warble and sing; by means of the consonants, the singer articulates. (See ARTICULATION and "Manual of Instruction.")

VOX HUMANA, (Lat. the human voice,) the name of an organ stop. (See ORGAN.)

W.

WALTZ, (Ger. *walzen*, to roll,) a German national dance in triple, commonly 3 : 8 time, rather slow, or at most in *allegretto*. The waltz has long been a favorite species of movement in Germany, frequently introduced into overtures, concertos, &c.

To WARBLE, to sing in a manner imitative of birds. Those treble singers whose voices are clear, fluted, shrill and flexible, and who run rapid divisions with smoothness and liquid sweetness, are said to warble.

WARBLER, a singer who dwells on the vowels alone, and treats all consonants simply as vehicles for the just articulation of the words.

WATER MUSIC, music composed expressly for performance on the water, consisting chiefly of parts for wind instruments. Music adapted for this purpose is of a simple, gliding character, destitute of rapid divisions, and consisting chiefly of the harmonic notes natural to the horn. Wind instruments on the water have a sweet and charming effect; and with a serene sky, are heard at a great distance. The more musical a sound the farther it is heard, hence at a distance all discordant sounds are lost, and nothing is heard but pure harmony.

WELCH HARP, a very ancient instrument, mounted with two or three rows of strings, without pedals.

WELCH TUNES, melodies of the ancient Cambrians similar to those of the Irish.

WHISTLE, a small shrill wind instrument, in tone resembling a fife, but blown at the end like the old English flute.

WHOLE NOTE. (See CHARACTERS.)

WILD MUSIC, the music of uncivilized countries; or compositions characterized more by feeling and originality of imagination, than by any just or systematic succession of sounds.

WIND INSTRUMENTS, those instruments in which a column of air confined in a tube is the vibrating body, in distinction from stringed and pulsatile instruments. (See these articles, and PIPES.) In the voices of wind instruments, we may notice a marked distinction of accent, on which their distinctive character chiefly depends. This is produced by the formation of the mouth piece, by which they are blown. The meek tone of the hautboy is unlike the energetic voice of the clarinet or the soft tones of the flute; and the fire of the trumpet bears no resemblance to the mellow tones of the horn. There are four different methods of exciting the vibrations of the air in wind instruments.

FIRST, by blowing across an orifice called the *embouchure* or mouth hole. By this method, the Flute, Fife, and Pandean pipes are blown. (See PIPES 7, [3].) To produce the sound on the flute and fife, the open instrument is placed horizontally against the under lip, with the embouchure upwards before the mouth; the lips are then extended as in laughing, leaving only a very small orifice in the center, which is first formed by forcing the air through the lips while closed. If the sound is not distinct and clear, on first blowing into the orifice, the instrument may be turned a little outward or inward, so as to get the hole in the right position. If this does not succeed, the size or form of the orifice of the mouth must be modified. When a clear tone is produced, the holes may be gradually stopped by the fingers, commencing with that nearest the mouth hole. To get the different sounds from the same fingering, see PIPE 8.

Second, by blowing through a *short tube*, or conductor which leads to the mouth of the instrument, so adjusted that the wind strikes against the lip, like a common whistle. In this way, diapason organ pipes are constructed, (see Organ II, 1, p. 280:) and also the English Flute, and the Flageolet. In principle, this method of exciting the vibrations is the same as the preceding. The only difference is, in the latter case, the wind is directed across the orifice by a mechanical contrivance.

Third, by means of a *mouth piece* adjusted to the lips, which aids in giving the orifice of the mouth the proper form and position. By this method are blown the Horn, Trumpet, Trombone, and Serpent. For the manner of blowing, see Horn, p. 196.

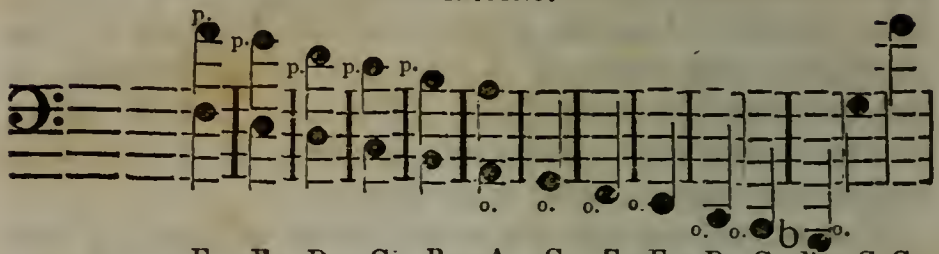
Fourth, by means of a *reed*. (See Reed, Pipes 7, 2; and Organ, II, 1, 2, p. 280.) The reed instruments are the Hautboy, Clarinet, Bassoon, and the reed pipes of an organ. The pureness of the tone depends much on the quality and position of the reed or tongue. It must be sufficiently thin to blow easily, and yet so stiff as to give the notes full and clear, without any hissing. In playing, it is necessary to press the reed gently with the lips, gradually increasing the pressure as the notes ascend. In vibrating, the tongue should not touch the pipe, as that will make the sound harsh. (See Reed.)

Scales of WIND INSTRUMENTS. In giving the following scales, we uniformly commence with the open instrument, and gradually close the open holes, beginning with that next the mouth hole, and proceding through the instrument; then we give the other natural notes of the instrument; next the intermediate semitones made without the keys; and finally, the same for instruments which have the closed keys, for the semitones. It must be observed,

that when the fingering is given for any sharped note it answers also for the flatted note above; and *vice versa.* (For explanations, see p. 432.)

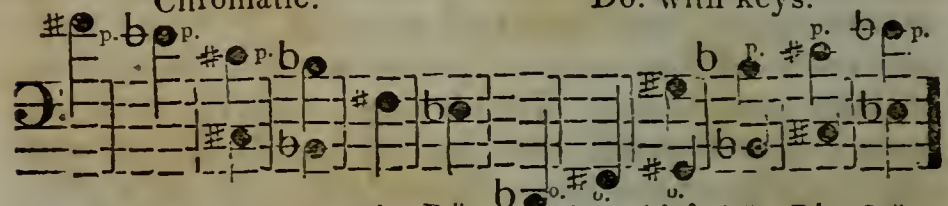
1. Scale for the Bassoon.

Diatonic.



		F	E	D	C	B	A	G	F	E	D	C	B♭	G	G
L. H.	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0
	2	0	0	2	2	2	2	2	2	2	2	2	2	2	2
	3	0	0	0	3	3	3	3	3	3	3	3	3	3	3
R. H.	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0
	2	0	0	0	0	0	2	2	2	2	2	2	2	2	0
	3	0	0	0	0	0	0	3	3	3	3	3	3	3	0
	1K	0	0	0	0	0	0	0	K	K	K	K	K	0	0
Bend R. H.	T.	0	0	0	0	0	0	0	0	T	T	T	T	0	0
	2K.	0	0	0	0	0	0	0	0	0	K	K	K	0	0
L. H.	T.	0	0	0	0	0	0	0	0	0	0	T	T	0	0
	3K.	0	0	0	0	0	0	0	0	0	0	0	K	0	0

Chromatic. Do. with keys.

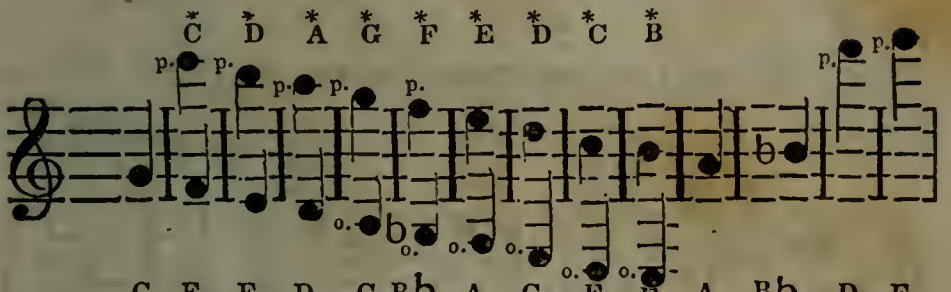


G♭ F♯	D♯ E♭	D♭ C♯	A♯ B♭	G♭ F♯	D♯ E♭	D♯ E♭	G♭ F♯	A♭ G♯	A♯ B♭	D♭ C♯	D♯ E♭
0	1	1	1	0	1	1	1	1	1	1	1
2	2	2	2	2	0	2	2	2	2	2	k 2 o
3	0	0	3	3	3	3	3	3	3	3	0
1	1	1	1	1	0	1	1	1	1	k o	0
0	2	0	0	2	0	2	2	2	k 2 o	0	0
0	3	0	3	3	0	3	3	3	0	0	0
K	0	0	0	K	0	K	K	k o	0	0	0
0	0	0	0	0	0	T	k o	0	0	0	0
0	0	0	0	0	0	k K o	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0

1 K. 2 K. and 3 K. denote the open keys, commencing at the last hole for the right hand finger, and proceeding to the end of the instrument; k o closed keys to be opened.

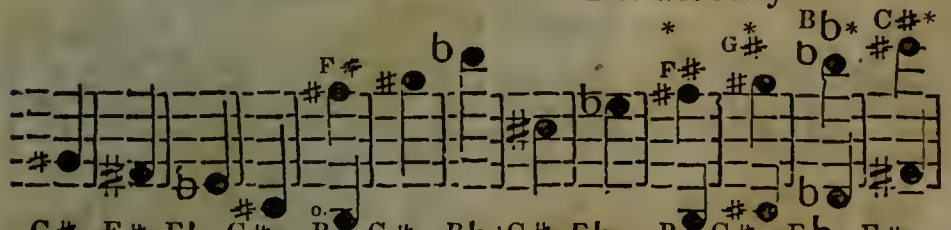
2. Scale for the Bugle. (See Horn.)

3. Scale for the Clarinet.



		G	F	E	D	C	B♭	A	G	F	E	A	B♭	D	E
L. H.	B. K.	*	*	*	*	*	*	*	*	*	*	-	0	0	0
	F. K.	-	-	-	-	-	-	-	-	-	-	0	0	0	-
	T	0	T	T	T	T	T	T	T	T	T	0	0	T	T
	1	0	0	1	1	1	1	1	1	1	1	0	0	0	0
	2	0	2	0	2	2	2	2	2	2	2	0	0	2	2
	3	0	0	0	0	3	3	3	3	3	3	0	0	0	3
R. H.	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0
	2	0	0	0	0	0	0	2	2	2	2	0	0	0	0
	3	0	0	0	0	0	3	0	3	3	3	0	0	0	0
	4	0	0	0	0	0	0	0	4	4	0	0	0	0	0
	Long open key					.	.	.	.	K					

Chromatic. Do. with keys.



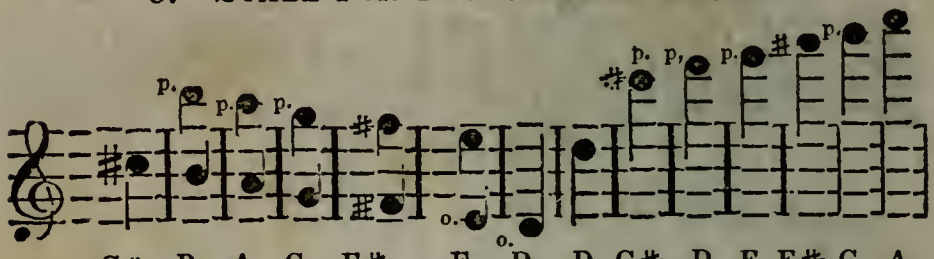
	G♯	F♯	E♭	C♯	B	G♯	B♭	C♯	E♭	B	C♯	E♭	F♯
	-	-	-	-	*	0	0	0	0	*	*	*	*
	0	-	-	-	-	-	T	-	-	-	-	-	-
	T	0	T	T	T	T	1	T	T	T	T	T	kTo
	0	1	1	1	1	1	0	1	1	1	1	1	0
	0	2	0	2	2	2	3	2	2	2	2	k2o	0
	0	0	3	0	3	0	0	3	3	3	k3o	0	0
	0	0	0	1	0	1	0	1	1	k1o	0	0	0
	0	0	0	2	2	0	0	2	2	k0	0	0	0
	0	0	0	0	3	0	0	3	0	0	0	0	0
	0	0	0	0	0	0	0	4	0	0	0	0	0
Front key		.	.	.	.	.	.	.	ko				
Long short key		.	.	.	.	.	.	ko					

B. K. is back key; F. K. front key. There is also sometimes another front key, used for shaking some of the high notes The back key is used only for the high notes marked*; where it is marked * in the fingering, it is to be opened for the high notes, and closed for the low.

4. Scale for the fife, same as that for the C flute.

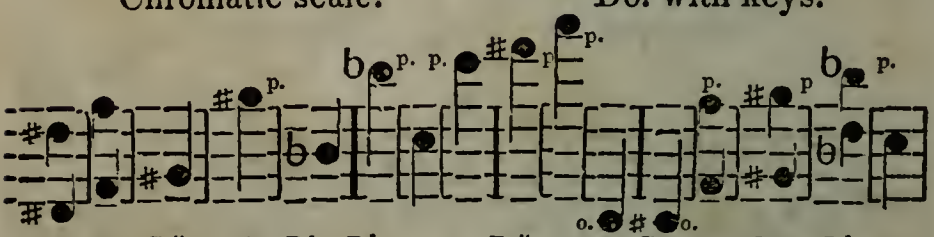
5. Scale for the flageolet, is nearly the same as that for the flute, that it is unnecessary to give it place.

6. Scale for the German Flute.



		C♯	B	A	G	F♯	E	D	D	C♯	D	E	F♯	G	A
L. H.	1	0	1	1	1	1	1	1	0	0	0	1	1	1	0
	2	0	0	2	2	2	2	2	2	2	2	2	2	0	2
	2	0	0	0	3	3	3	3	3	3	3	0	0	3	3
R. H.	1	0	0	0	0	1	1	1	1	1	0	0	1	0	1
	2	0	0	0	0	0	2	2	2	0	0	2	2	0	2
	3	0	0	0	0	0	0	3	3	0	0	3	0	0	0
	k	-	-	-	-	-	-	-	-	0	0	0	-	-	-

Chromatic scale. Do. with keys.



	D♯ E♭	F	G♯ A♭	G♯ A♭	B♭ A♯	B♭ A♯	C	C	D♯ E♭	F	C	C♯ D♭	F	G♯ A♭	B♭ A♯	C
	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1	k^{1}_{0}
	2	2	2	2	0	0	2	2	2	2	2	2	2	2	k^{2}_{0}	0
	3	3	0	0	3	3	3	0	3	0	3	3	3	k^{3}_{0}	0	0
	1	1	1	1	1	0	0	1	0	1	1	1	1	0	0	0
	2	0	2	0	0	0	0	2	2	2	2	2	k^{2}_{0}	0	0	0
	3	3	3	0	3	0	0	3	3	0	3	3	0	0	0	0
	0	-	-	-	0	0	-	0	0	-	-	-	0	0	-	-
			C♯ key		.	.	.	.	.		K	K				
			C♮ key		.	.	.	.	.		K	-				

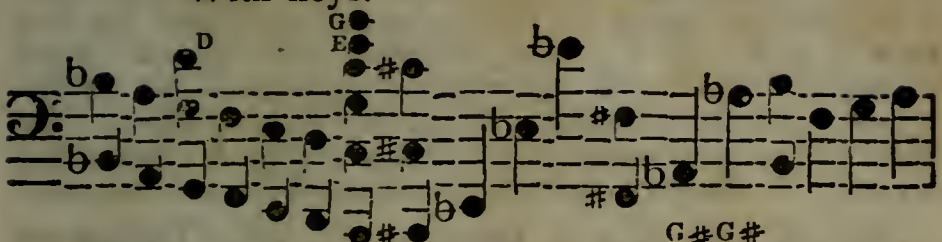
In the keyed flute, there is always an F♮ key, a G♯, and a B♭ key: C♮ key, and the two long keys for low C and C♯, and also keys for shakes are sometimes added. (See Flute.)

7. Scale for the Hautboy, is nearly the same as that for the flageolet, and long keyed flute.

8. Scale of the Horn. (See Horn.)

9. Scale of the Serpent.

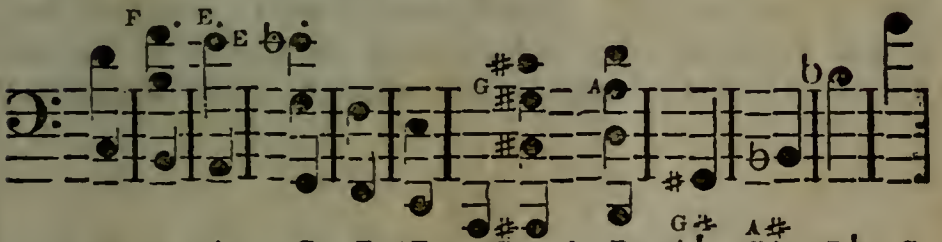
With keys.



		B♭	A	G	F	E	D	C	C♯	E♭	E♭	E♭	F♯	A♭	A♭	B	F	G	A
	Thumb key	.	.	.	.	.	.	.	.	.	.	.	.	.	.	0			
L. H.	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0
	2	0	0	2	2	2	2	2	2	2	2	0	2	0	2	0	2	2	1
	3	0	0	0	3	2	3	3	3	3	3	3	3	3	3	0	3	3	0
	4th finger key	.	.	.	.	.	.	.	.	.	.	.	0	.	0	.	0	0	
R. H.	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0	1	1
	2	0	0	0	0	0	2	2	2	0	2	0	0	0	2	0	0	2	2
	3	0	0	0	0	0	0	3	3	3	0	0	0	0	3	0	0	3	3
	Thumb key			-	*	-	0	-	-	-	*	0	0						

* Key to be opened for the high notes.

Without keys.



		C	B	A	G	F	*E	*C and	D	A♭	B♭	B♭	G
L. H.	1	0	1	1	1	1	1	1		1	1	1	1
	2	0	0	2	2	2	2	2		2	0	2	2
	3	0	0	0	3	3	3	3		0	3	3	0
R. H.	1	0	0	0	0	1	1	1		1	0	0	1
	2	0	0	0	0	0	0	2		0	0	2	0
	3	0	0	0	0	0	0	0		0	0	3	0

* Not the true sound, without modification.

This fingering is that which is most in use; but fingering alone will not accomplish what is wanted. Many of the sounds are harmonics, and are produced by a modification of the blowing. (See Pipe 8.) But this is not all; not only the harmonics, but also some semitonic notes are made by a different conformation of the mouth and manner of blowing. Thus, in the keyed serpent, double B♭ and double B, may be produced, with all the holes closed, by gently restraining the air or blowing, necessary to produce double C. Without keys, E and E♭ are produced by the same fingering; and F and F♯; and double C, C♯ and D, and G♯ and A in the middle, and high F♯; see *Scale* above: high E♭ is a modification of G; high F of A, &c.

In these scales, R. H. 1, 2, 3, 4, denote the several fingers of the right hand; L. H. 1, 2, 3, 4, the same of the left hand. R. H. T., thumb of the right hand; L. H. T. do. left hand. The ciphers 0 denote the holes to be left open, and the characters, 1, 2, 3, 4, T. and K. the holes to be closed. Small k o placed between the other characters, denotes that the key which opens between those two holes, is to be raised. The letter p. directs to compress the lips, and to blow more strongly, and . the contrary, in order to produce the desired sounds.

10. Scale of the Trombone. (See Trombone and Horn.)

11. Scale of the Trumpet. (See Horn.)

WIRES, the strings of a piano forte and other similar instruments. (See Piano forte, & Strings.)

WOLF, a figurative term used in the art of tuning by perfect fifths, and applied to those rare keys in which the false intervals are prominent: for instance, if the semitone between G and A is obtained by tuning by perfect fifths downwards from C, or to A flat, it will be intolerable when used as the fifth in the minor key of C sharp or four sharps. (See Tuning.)

Z.

ZA, the syllable applied by the French to B flat.

ZAMPOGNA, (Ital.) the bagpipe; also applied to the *flute a bec.*

ZAUBERFLOTE, (Ger.) the magic flute.

ZELOSO, } (Ital.) with zeal and exertion.
Con ZELO, }

ZOPPA, } (Ital. lame,) a species of music
Alla ZOPPA, } in which one note is so placed against or between two others as to produce in the performance a syncopation, or leaping effect.

ZUFOLO, (Ital.) any little flute or flageolet, of a shrill sound; but more especially such as are used in teaching birds.

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